Chemicals for Molecular Imaging

2017

Manufacturing and development of chemicals for molecular imaging

- Worldwide leading supplier of PET precursors and FDG reagents kits
- Production and development of PET and SPECT precursors and reference standards
- Manufacturing of reagents kits and cassettes, particularly kits for FDG, F-DOPA, FLT, F-Choline, NaF, F- MISO, FES and FET production
- US (FDA) and European Drug Master File (DMF) for Mannose Triflate (FDG precursor)
- European Drug Master File (DMF) for FDG reagents kits using the GE TRACERlab MX, Neptis and Siemens Explora One synthesis modules
- Further DMFs and technical documents for PET and SPECT precursors
- Custom synthesis and manufacturing according to GMP for APIs
- Design, custom synthesis and production of peptides (GMP quality on request)
- Leading manufacturer of reagents kits and cassettes for ^{68}Ga -Labelling
- Performance of stability studies
- Hot Lab for R&D of new pharmaceutical kits and cassettes and co-operation with pharmaceutical companies
- Development of radiotracers as well as labelling and purification strategies
- Distributor of ^{18}O-Water FDG grade and GMP grade
- ROVER - ABX PET evaluation software
- 17 years experience
- 190 professionals (among them 20 with PhD)
- New manufacturing, filling and assembling sites
- Clean room facilities for the production and filling under pharmaceutical conditions
- Audited and accepted as GMP API manufacturer by:
  - German pharmaceutical authorities
  - FDA (US Food and Drug Administration)

History of ABX

1997:
- foundation of ABX GmbH
- vision: production of PET precursor – Diprenorphine

1998:
- start with own laboratory (30 sqm)
- start with CRO business

2001:
- start of kit production in new facilities in Robert-Bosch-Strasse

2002:
- split off of CRO business into independant ABX-CRO GmbH
- purchase of facilities in Heinrich-Glaeser-Strasse 10 – 14 and start of reconstruction

2003:
- chemical labs and clean rooms in Heinrich-Glaeser-Strasse 12 operational

2004:
- successful audit by “Regierungspraesidium Dresden” for GMP production

2005:
- successful audit by FDA for GMP compliance for APIs
- successful audit by “Regierungspraesidium Dresden” for license of wholesalers

2006:
- change in ownership – new owner: CIL / Cambridge Isotope Laboratories, Inc. (USA), subsidiary of Otsuka Pharmaceuticals (Japan)

2007:
- hot (radiosynthesis) laboratory for R&D in Heinrich-Glaeser-Strasse 10 operational
- re-audit by “Regierungspraesidium Dresden” for GMP-production

2008:
- re-audit by FDA for GMP compliance for APIs

2011:
- re-audit by “Landesdirektion Dresden” for GMP production

2012:
- re-audit by FDA for GMP compliance for APIs

2013:
- new production building for GMP filling and assembling in Heinrich-Glaeser-Strasse 14 operational

2013:
- re-audit by “Landesdirektion Dresden” for the new ABX GMP facility

2015:
- new cyclotron facility including additional radiochemistry lab operational

FDG

Mannose Triflate (TATM)

- Globally, ABX is the biggest producer of Mannose Triflate
- continuous production, with a constant stock of minimum 5 kgs
- documentation in **Drug Master Files** (US-DMF and ASMF) in accordance with regulations of the International Conference of Harmonization (ICH) – submitted to the national authorities of:

USA (FDA)	Germany	Austria	Belgium
Czech Republic	Denmark	Finland	France
Greece	Hungary	Ireland	Israel
Italy	Luxembourg	Portugal	Singapore
Slovakia	Spain	Sweden	Switzerland
The Netherlands	United Kingdom		

- validated production process
- detailed stability testing in accordance with ICH regulations
- fully automated filling under argon atmosphere with a controlled pharmaceutical background

FDG Reagents Kits

Our kits contain all chemicals needed for the FDG synthesis in the modules of:

- GE TRACERlab MXFDG – recommended by GE
  (ASMF available in Denmark, France, Spain, Sweden)
- GE TRACERlab FXF-N or FXFDG – recommended by GE
- IBA Synthera
- SIEMENS Explora FDG4
- SIEMENS Explora One – recommended by SIEMENS
- ORA NEPTIS perform and plug – recommended by ORA
- ORA NEPTIS mosaic-LC and mosaic-RS – recommended by ORA
- SCINTOMICS – recommended by SCINTOMICS
- Eckert & Ziegler (former Bioscan) FDG-Plus
- SYNTHRA FDGtwo and Rnplus – recommended by SYNTHRA

All our kits can be delivered as ***chemical grade*** as well as ***pharmaceutical grade*** quality (with specified analytical limits and tested for microbiological contamination).

Cryptand 222

We also manufacture Cryptand 222 for the production of FDG

- high quality Cryptand
- special analytical procedures meet the demands of [^{18}F]FDG synthesis

Cassettes

We produce cassettes and tubing systems for several of the existing FDG modules

NEW: We have developed a high-yield cassette, ABX product no. K-1401TM, for the ORA NEPTIS and the SIEMENS Explora One module, that can be used alternating for all GE TRACERlab MX and COINCIDENCE boxes.

Cartridges

- **GE TRACERlab MX$_{FDG}$**
  - pre-conditioned QMA cartridge
- **GE TRACERlab FX$_{FDG}$ or FX$_{F-N}$ and SYNTHRA FDGtwo and Rnplus**
  - GE ^{18}F Separation cartridge (Chromafix PS-HCO3)
  - GE FDG Purification cartridge (Chromabond Set IV and V)

Evacuated Vials in different sizes

We manufacture evacuated vials for the use in the GE TRACERlab MX and FX module as well as evacuated and/or sterile vials for any other needs.

Accessories/Ancillaries

In addition we offer further cartridges and vials, syringes, needles, filters and so on for as example the GE TRACERlab MX, the IBA Synthera, the SIEMENS Explora and other FDG modules

STOCK in the US

ABX keeps a stock of Mannose Triflate, Cryptand 222 and Kits for the GE TRACERlab MX and FX module in South Bend, Indiana. We can deliver to every place in the US within 24 hours (overnight shipment) in case you inform us in the morning. Otherwise shipments may take up to 48 hours.

Please note that research chemicals and other products can only be shipped from our stock in Germany.

US phone no.: (574) 271-3521

PET and SPECT Precursors

- **PET precursors for**

FDG	F-DOPA	FLT	FET
F-Choline	F-MISO	FAZA	FES
FHBG	Fallypride	MPPF	Altanserin
FDHT	Flumazenil	Diprenorphine	PIB
Methionine	Raclopride	DASB	PK 11195
beta-CIT	PE2I	Altropane	FLB 457
PBR28	Verapamil	DTBZ	MHED
MDL 100907	ABP688	ATSM	**etc.**

- **Reference standards**
- **Peptides**
  - DKFZ-PSMA-11 (GMP and research grade)
  - DKFZ-PSMA-617 (GMP and research grade)
  - DOTA-TATE (GMP)
  - DOTA-NOC (GMP and research grade) **etc.**
- **SPECT precursors for**
  - MIBG (GMP and research grade)
  - FIAU **etc.**
- **Chelators for radionuclides**
  - CuMibi (GMP and research grade)
  - Mebrofenin
  - Hynic
- EC/ECD **etc.**

Certificate of Analysis as well as NMR spectrum and/or HPLC included.

Reagents Kits

FDG reagents kits:

- **GE TRACERlab MXFDG** – recommended by GE
  (ASMF available in Denmark, France, Spain, Sweden)
- **GE TRACERlab FXF-N or FXFDG** – recommended by GE
- **IBA Synthera**
- **SIEMENS Explora FDG4**
- **SIEMENS Explora One** – recommended by SIEMENS
- **ORA NEPTIS perform and plug** – recommended by ORA
- **ORA NEPTIS mosaic-LC and mosaic-RS** – recommended by ORA
- **SCINTOMICS GRP** – recommended by SCINTOMICS
- **Eckert & Ziegler** (former Bioscan) **FDG-Plus**
- **SYNTHRA FDGtwo and Rnplus** – recommended by SYNTHRA
- Others on request

Complete solutions for additional ^{18}F and ^{68}Ga tracer productions:

- F-DOPA, FLT, F-Choline, NaF, F-MISO, FES, FET, FHBG, SFB, F-acetate, and FDGal reagents kits designed for the **GE TRACERlab MX**, the **ORA NEPTIS perform, plug and mosaic-RS** as well as the **SIEMENS Explora One** synthesis modules including cassette, accessories & cartridges, manual and software (sequences)
- F-DOPA, FLT, FET, F-MISO, F-Choline, FES and ^{11}C-chemistry reagents kits designed for the **GE TRACERlab FX** box
- FLT, NaF, F-Choline and F-DOPA reagents kits designed for the **IBA Synthera** box including cassette (IFP) and ancillaries
- FLT, NaF, F-Choline, FET and F-MISO reagents kits
  as well as general ^{68}Ga labelling, ^{90}Y and ^{177}Lu reagents kits designed for the **SCINTOMICS GRP** module including cassettes

- FLT and F-MISO reagents kits designed for the **Eckert & Ziegler** (former Bioscan) **FDG-Plus box**
- ^{68}Ga reagents kits (two cationic versions) designed for the **Eckert & Ziegler Modular-Lab systems – supplied by Eckert & Ziegler**
- ^{68}Ga reagents kits and cassettes designed for the **ITG iQS ^{68}Ga Fluidic Labeling Module – supplied by ITG**
- F-DOPA cassettes filled with all reagents for the **GE FASTlab Synthesizer – supplied by GE**

Certificates of Analysis always included.

We are always interested in the development of new reagents kits and cassettes systems for YOUR 18F and 68Ga tracers – development according to you requests. We are well experienced in that field and do have an own radiochemistry lab with several hot cells; nearly all common synthesis modules are installed. Also, we could offer the development of an appropriate quality control procedure. If you should be interested in that type of service or would like to learn much more about the possbilities we could offer, please contact us at info@abx.de.

Custom Synthesis

ABX offers the following services:

- **Custom synthesis** in quantities from milligrams to kilograms, development, and production of:

  PET precursors and reference standards

  SPECT precursors

  Neurochemicals

  Metabolites

- Synthesis of **Peptides** from 5 to 40 amino acids (quantities up to 10 grams) special modifications including: D-amino acids, conjugation with complexation ligands, Biotin, others on request

- **GMP production** in full compliance with pharma industry standards of quality and confidentiality and in compliance with ICH Q7 (GMP for APIs), chapter 19 (APIs for use in clinical trials)

- Establishing **DMF** (Drug Master File) for PET and SPECT precursors

- Performance of **stability studies**

- **Custom research**, **consultancy service** and **expertises** for the production of new or already existing/known PET precursors for the execution of clinical and pharmaceutical studies/trials.

Please contact us at info@abx.de

Hot Lab

In 2007 ABX started with an own R&D hot (radiosynthesis) laboratory with affiliated quality control department and now offers:

- Design of **new pharmaceutical kits and cassettes** for various radiotracers
- Development of **labelling strategies** for a better performance of new synthesis modules in the production of radiotracers with focus on reliability, yield, and purity
- **Yield enhancement** of radiotracers
- Development of **purification strategies** using cartridges instead of HPLC purification
- Permanent refinement of all kit components and chemicals with regard to quality and performance
- **Technical support** for customers
- Continuous improvement of existing ABX radiotracers

Installations and equipment are compliant with GMP regulations and ready for co-operations with **pharmaceutical companies** for:

- **Testing of new radiotracers**
- Definition and **preparation of analytical standards** for by-products occuring during radiosynthesis in cooperation with the department of medicinal chemistry
- Formulation and stability studies of radiotracers

Please contact us at info@abx.de

PET Software ROVER

ROVER is an evaluation program designed for the fast interactive visualization, analysis and easy data and image export of tomographic image data. It combines several functionalities related to the efficient evaluation of these data with the emphasis on (human and small animal) PET. Nevertheless many features are also useful with other imaging modalities (e.g. CT, MRI).

List of ROVER key features:

- **General tomographic image data visualization**

ROVER combines versatile image viewing and image export capabilities. The data can be visualized in the orthogonal view (transaxial, coronal, sagittal), the multiple planes view or a maximum intensity projection. ROVER is able to load and process an arbitrary number of data sets (limited only by available RAM) and allows rapid inter-study navigation. ROVER currently supports the following image file formats:

  – DICOM
  – ECAT7 (Siemens/CTI)
  – microPET Concorde

- **3D ROI analysis and volume determination**

ROVER targets especially the problem of quantitative 3D ROI (Region Of Interest) evaluation of PET investigations (dynamic as well as whole body) incorporating ROI rendering in a separate colour table. ROVER also includes tools for rapid and accurate 3D ROI volume determination including automatic background subtraction that allows the identification of changes in ROI size and tracer accumulation (e.g. SUVs) during oncological follow up studies. ROVER features ROI data export as DICOM RT structure sets for PET supported target definition in radiation treatment planning.

- **Synchronous data evaluation**

ROVER can visualize several image volumes in a parallel viewing mode. This is especially useful for the parallel viewing of follow up studies or individual time frames of a dynamic image file. For this purpose the images are automatically co-registered to allow a meaningful comparison. Data analysis of these files can be performed and reported simultaneously.

- **Data and Image export**

All rendered images can be easily exported in various image formats. The ROIs detected by ROVER can be exported to data files (XML and flat text) for subsequent cumulative data evaluations. Care has been taken to allow easy access of these files with many standard OPEN SOURCE tools (e.g. gnuplot, octave, R) as well as with commercial software (e.g. MATLAB, IDL, Excel).

Please contact us at info@abx.de

Orders and Inquiries

ABX accepts orders and inquiries by phone, fax, e-mail and mail. Please do not hesitate to ask for an individual quotation.

Please contact

ABX advanced biochemical compounds GmbH
Heinrich-Glaeser-Strasse 10 – 14
01454 Radeberg
Germany

Phone: + 49 / 35 28 / 40 41 60
Fax: + 49 / 35 28 / 40 41 65
E-mail: sales@abx.de

If the product is in stock we will deliver worldwide within 5 days maximum.

Common PET chemicals such as Mannose Triflate, precursors for FLT, F-DOPA, F-MISO, Choline, PIB, Methionine and Raclopride as well as MIBG, CuMibi, DKFZ-PSMA-11, DKFZ-PSMA-617, DOTA-NOC, DOTA-TATE, $LiAlH_4$, TBA-HCO_3, and Cryptand are always in stock.

So are FDG reagents kits and cassettes for the GE TRACERlab MX, the IBA SYNTHERA, the several ORA NEPTIS synthesis modules, SIEMENS Explora One, and the SIEMENS Explora FDG4 module as well as FDG reagents kits including the Chromafix and Chromabond cartridges for the GE TRACERlab FX and SYNTHRA FDG modules.

Terms of Payment

Our Terms of Payment are by cheque to our name or by remittance to our account within 14 days after receipt of our products.

We also accept the following credit cards:

1. MasterCard/Eurocard
2. VISA
3. American Express

Catalogue Entry Information

Chemical Abstracts Registry numbers (CAS-RN)
The numbers that appear in square parentheses in the catalogue entries are the Chemical Abstracts Service (CAS) numbers. Each CAS-RN is a unique identification code assigned to a chemical substance by the American Chemical Society. In some cases, the CAS-RN are not yet assigned. The CAS-RN are listed as accurately as possible but may not reflect the salt or level of hydration of the product supplied.

Stereochemistry
Where specific stereochemistry is indicated in the structural formula, the product is supplied in the conformation shown. If stereochemical information is missing, products are supplied as mixtures of stereoisomers and/or racemate. In some cases, this is also indicated by the notation “D,L” and/or “racemic” or “rac” in the name.

Molecular weights
The molecular weight displayed in the catalogue represents the product as shown by the chemical structure including any salt forms with exception of peptides (m.w. of net peptides is provided). During manufacture water may be incorporated into the product (hydration). The degree to which this occurs can vary from batch to batch affects the molecular weight.

Customized filling
Each research chemical is filled according to customers needs. Minimum amount is 1 mg (except for peptides). Prior to sealing, all vials are flushed with argon gas for precautionary reasons.
Typically, two vial types are used:

> “crimp cap vial” – amber glass vial (DIN 2R) with teflon faced chlorobutyl stoppers and centre tear-off crimp caps,
>
> or
>
> “screw cap vial” – amber glass threaded vial (3 ml), GL 14 with wine-red chlorobutyl rubber sealing cone, GL 14 and white PP screw caps.

In addition, larger quantities can be provided in amber glass threaded vials (25 ml), GL 22 with wine-red chlorobutyl rubber sealing cones and white PP screw caps.

We also offer filling into clear glass headspace vials (10 ml) with teflon faced rubber stoppers and tear-off crimp cap closure for use in GE TRACERlab MX synthesizers.

For peptides, quantities smaller than 1 mg are filled by aliquotation of a stock solution and subsequent lyophilization in clear glass vials with inner cone and crimp cap closure.

Please indicate amount and container/closure type when ordering a product. Other types are available on request.

Weighing accuracies
The quantity of compound supplied in our vials is weighed to the accuracy required for direct solution preparation. The weighing error is ≤ 5 % depending of the amount filled. (e.g. 5 % for 10 mg, 1 % for 1000 mg) Please refer to the vial label for detailed information.

Product Appearance

Empty vials
The appearance of product (colour, physical condition) is listed in the catalogue. Some products, especially those sold in small quantities or with low melting point, are transparent. This can make the product appear as a clear, thin film on the bottom and walls of the vial and may not be readily visible without careful scrutiny.

Typically the following products appear to be transparent: FDM – 1120, Fallypride and derivatives – 1550 to 1580, Norverapamil – 5600, TRODAT – 7400.

Physical condition
Some products, especially FDM (product number 1120), appear as (sticky) oil. In this case, filling may have been performed by dissolving the material in an appropriate solvent, aliquotation and evaporation of the solvent. After this procedure, sometimes the material is solid, sometimes appears as semisolid. The QC release procedure always takes place after the so called “liquid filling”.

Safety

Safety information
Every possible precaution should be taken when handling, using, storing or disposing of any chemical supplied by ABX. As far as possible, we provide advice and assistance to customers concerning the safe handling of our products. For research chemicals, the potential hazards are often not known and an absence of warning does not mean that no hazard exists. It is the users’ responsibility to ensure that relevant safety precautions are taken at all times.

Glass vial opening instructions
The majority of our products are supplied in glass vials with a screw top lid. During transit, material may accumulate in the vial top. This can be dislodged by gently tapping the vial before opening. If product is stored at lower temperature, please allow to warm up before opening to avoid moisture to accumulate inside the container.

Product use
All our products are intended for laboratory use only. They are not intended for human use or consumption unless further processed and must not be used for cosmetic, agricultural, or domestic purpose. They should only be used by trained scientists working under controlled conditions who are familiar with the potential hazards.

Material Safety Datasheets (MSDS) and Certificates of Analysis (CoA)
Copies of the Product Material Safety Datasheets (MSDS) and Certificates of Analysis (CoA) are included with each individual product when shipped.

Purity

Bioactive chemical and peptide purity
Unless otherwise stated, ABX chemicals and peptides are of high purity, typically > 95 %. The purity quoted in the catalogue entry for each product is the minimum purity of the active ingredient that any given batch will have. This information is intended as a general guideline only. Please consult the certificate of analysis (CoA) for data specific to each individual batch.

Product sterility
Unless otherwise stated, ABX products are not filled under sterile conditions, and should not be treated as such.

Quality control
Chemical purity is assessed using an array of techniques including HPLC, chiral HPLC, NMR, microanalysis, melting point, optical rotation, TLC and mass spectrometry. Please see the individual product Certificate of Analysis for details.

Solubility information
Solubility information for any product can be found on package leaflet of the product shipped.

Stability and Storage

Bioactive chemical stability and storage
Information concerning research product stability has rarely been reported and in most cases we can offer a general guidance only. Our standard storage recommendations are either 5 ± 3 °C (refrigerator) or – 20 ± 5 °C (deep freezer). In all cases refer to the CoA or vial label as conditions vary for different products.

Detailed stability data are available only for products manufactured according to GMP requirements for APIs (ICH Q7). Please inquire.

Peptides are provided in lyophilized form and should be stored dessicated at – 20 °C. Long-term storage of peptides in solution is not recommended.

Short periods of high temperature
Short periods at higher temperatures than recommended (periods < 1 week), such as can occur during shipping, will not significantly affect product life or quality.

Retest Policy
Based on our scientific and expert knowledge as well as experience with our products as chemical substances and retest data we propose a recommended retest date of 3 years after date of manufacturing for research chemicals. Exceptions are possible for products with limited chemical stability. ABX is not obliged to perform a retest, once this period has expired, except the respective batch is not sold completely yet. No stability tests are performed with research chemicals. Please inquire if you need a retest for a specific research product.

This policy does not apply for products manufactured according to GMP for APIs for Use in Clinical Trials (ICH Q7, Cp. 19) or GMP for APIs, please inquire.

Content

List of all catalogue entries.

Product Number	Name
100	Mannose Triflate, ultra pure
101	Mannose Triflate, ultra pure
102	Mannose Triflate, ultra pure
105	Mannose Triflate PLUS, ultra pure
107	Mannose Triflate PLUS, ultra pure
1100	FDG
1108	6-Deoxy-6-fluoro-D-glucopyranose
1109	6-FDG precursor
1110	ClDG
1117	Glucose Triflate
1118	MBETG
1119	MBBTG
1120	FDM
1130	ACY-FDG
1131	1,2,3,4-Tetra-O-acetyl-beta-D-glucopyranose
1138	Me-4-FDG precursor
1140	Talose Triflate
1150	FDGal
1180	DMTr-lyxothymidine
1190	DMTr-Nosyl-lyxothymidine
1200	Dimethoxybenzyl-FLT precursor
1210	Anhydrothymidine-FLT precursor
1219	FLT Ultra Pure
1220	3′-Fluoro-thymidine (FLT)
1222	3′-Iodo-thymidine
1230	5′-O-Benzoyl-2,3′-anhydrothymidine
1231	5′-O-Benzoyl-2,3′-anhydrothymidine (GMP)
1240	3-N-Boc-5′-O-dimethoxytrityl-3′-O-nosyl-thymidine
1241	3-N-Boc-5′-O-dimethoxytrityl-3′-O-nosyl-thymidine (GMP)
1250	2,2′-Anhydrothymidine
1260	2′-Fluoro-thymidine
1261	3-N-Boc-5′-O-dimethoxytrityl-3′-fluorothymidine
1280	DEMM
1290	Thymidine
1300	6-Trimethylstannyl-L-DOPA
1302	6-Trimethylstannyl-D,L-DOPA
1303	6-Trimethylstannyl-D-DOPA
1310	6-Fluoro-L-DOPA hydrochloride
1311	6-Fluoro-D,L-DOPA hydrochloride
1312	F-L-DOPA pinacol boronate precursor
1320	DiBoc-Iodo-L-DOPA
1328	3,4-Di-O-Pivaloyl-L-DOPA
1329	4-O-Pivaloyl-L-DOPA Hydrochloride
1330	4-O-Pivaloyl-L-DOPA
1332	6-Hydroxy-D,L-DOPA
1335	Nucleophilic F-L-DOPA precursor
1336	n.c.a. Nucleophilic F-L-DOPA precursor
1337	6-Nitro-L-DOPA hydrogensulfate
1338	6-Nitro-Formyl-DOPA HCl
1339	6-Fluoro-Formyl-DOPA HCl
1340	TriBoc-L-DOPA methyl ester

1341	TriBoc-D,L-DOPA ethyl ester
1342	TriBoc-L-DOPA ethyl ester
1350	TriBoc-Iodo-L-DOPA
1363	OMFD precursor ABX004
1369	OMFD
1370	N-Trifluoroacetyl-3,4-dimethoxy-6-trimethylstannyl-phenethylamine
1371	N-Trifluoroacetyl-3,4-di-tert-butoxycarbonyloxy-6-trimethylstannyl-phenethylamine
1380	6-Fluorodopamine
1400	NITTP
1401	NITTP (GMP)
1402	NITTP (GMP)
1410	Fluoromisonidazole
1420	Desmethylmisonidazole
1430	FETNIM precursor
1440	FETNIM
1450	1-(2,3-Diacetyl-5-tosyl-(α-D-arabinofuranosyl)-2-nitroimidazole
1451	1-(5-Deoxy-5-fluoro-α-D-arabinofuranosyl)-2-nitroimidazole
1452	N-(2-Tosyloxyethyl)phthalimide
1453	2,3,5,6-Tetrafluorophenyl-2-(2-nitroimidazol-1-yl)acetate
1454	N-(2-Fluoroethyl)-2-(2-nitroimidazol-1-yl)acetamide
1455	ATSM
1456	PTSM
1457	CuATSM
1459	NiATSM
1460	(R)-SCH-24518 hydrochloride
1462	(S)-SCH-24518 hydrochloride
1464	SCH-23390 hydrochloride
1466	SCH-23388 hydrochloride
1477	(R)-(-)-Norapomorphine hydrobromide
1480	(+)-Desmethyl-NNC112
1490	(+)-NNC112
1500	(S)-O-Desmethylraclopride hydrobromide
1501	(R)-O-Desmethylraclopride hydrobromide
1502	(R,S)-O-Desmethylraclopride hydrobromide
1510	(S)-O-Desmethylraclopride
1520	Raclopride
1521	Tin-epidepride precursor
1522	Epidepride
1530	FLB 604
1540	FLB 457
1550	Tosyl-Fallypride
1560	Fallypride
1570	Tosyl-Desmethoxyfallypride
1580	Desmethoxyfallypride
1590	N-Mesitylenesulfonyloxy-ethyl-spiperone
1591	Fluoroethylspiperone
1592	D-threo-N-NPS-Ritalinic acid
1593	D-threo-Methylphenidate hydrochloride
1600	(R)-N-Desmethyl PK11195
1609	(S)-PK 11195
1610	(R)-PK11195
1611	(R,S)-PK11195
1620	(S)-N-Desmethyl PK11195

1640	(R,S)-N-Desmethyl PK11195
1642	(+)-9-MeO-HNO hydrochloride
1643	(+)-HNO hydrochloride
1645	(+)-PHNO hydrochloride
1646	(+)-F-PHNO
1647	(+)-HNO hydrochloride (GMP)
1652	PBR28 precursor
1653	PBR28 standard
1654	FEPPA precursor
1655	FEPPA standard
1680	Azidomazenil
1681	Desmethylazidomazenil
1690	Nitromazenil
1691	Mazenil pinacol boronate
1700	Desmethylflumazenil
1710	Flumazenil
1720	Flumazenil acid
1721	Tosyloxyethylflumazenil
1730	Fluoroethylflumazenil
1753	Harmol
1755	Harmine
1760	(R)-Metomidate hydrochloride
1762	(S)-Metomidate hydrochloride
1770	(R)-Etomidate
1780	(R)-Desethyl-Etomidate
1782	(S)-Desethyl-Etomidate
1790	(R)-Fluoroethyl-Etomidate
1800	Nitro-Altanserin
1810	Altanserin
1820	Nitro-Setoperone
1830	Setoperone
1840	MDL105725
1850	MDL100907
1860	MDL100151
1870	MDL100907 tartrate salt
1880	SB206453
1881	SB206453 (GMP)
1882	SB207145
1900	MMSE
1910	16α-Fluoroestradiol
1916	FDHT precursor
1918	FDHT standard
1919	TNB-Androstanone
1926	FFNP precursor
1928	FFNP standard
2000	3-O-Trityl-6-O-desmethyl-diprenorphine
2010	Diprenorphine hydrochloride
2020	Diprenorphine
2030	3-O-Trityl-diprenorphine
2040	6-O-Fluoroethyl-6-O-desmethyl-diprenorphine
2050	6-O-Fluoroethyl-6-O-desmethyl-3-O-trityl-diprenorphine
2051	3-O-Trityl-6-O-desmethyl-phenethyl-orvinol
2052	Phenethyl-orvinol

2053	6-O-(2-Fluoroethyl)-6-O-desmethyl-phenethyl-orvinol
2055	3-O-Trityl-6-O-desmethyl-buprenorphine
2056	Buprenorphine hydrochloride
2060	(S)-(-)-Normethylcarbamoyl-GR 103545
2061	(R)-(+)-Normethylcarbamoyl-GR 103545
2062	Normethylcarbamoyl-GR 89696
2070	GR 89696 fumarate
2071	(R)-(-)-GR103545 fumarate
2072	(S)-(+)-GR89696 fumarate
2110	Acetic acid piperidin-4-yl ester hydrochloride
2120	Acetic acid 1-methyl-piperidin-4-yl ester hydrochloride
2130	Propionic acid piperidin-4-yl ester hydrochloride
2140	Propionic acid 1-methyl-piperidin-4-yl ester hydrochloride
2150	Butyric acid piperidin-4-yl ester hydrochloride
2160	Butyric acid 1-methyl-piperidin-4-yl ester hydrochloride
2200	L-Homocysteine
2205	D,L-Homocysteine
2210	L-Homocysteine thiolactone hydrochloride
2220	L-Methionine
2229	D-Methionine
2230	D,L-Methionine
2300	N-Boc-trans-4-tosyloxy-L-proline methyl ester
2301	N-Boc-trans-4-mesyloxy-D-proline tert-butyl ester
2310	N-Boc-cis-4-tosyloxy-L-proline methyl ester
2320	cis-4-Fluoro-L-proline
2321	cis-4-Fluoro-D-proline hydrochloride
2330	trans-4-Fluoro-L-proline
2340	rac [^{11}C]-AIB precursor
2342	S-[^{11}C]-AIB precursor
2390	Desmethylcarfentanil acid
2400	Desmethylcarfentanil, sodium salt
2420	Fluoroethyl-Carfentanil
2421	Fluoroethyl-Carfentanil hydrochloride
2450	(S)-FPSPPA
2460	(R)-FPSPPA
2470	(S)-Methyl-FPSPPA
2480	(R)-Methyl-FPSPPA
2500	(R)-Desisopropylcarazolol
2510	(S)-Desisopropylcarazolol
2511	(R,S)-Desisopropylcarazolol
2520	(R)-Carazolol
2530	(S)-Carazolol
2540	(R,S)-Carazolol
2550	(S)-N-Desisopropylpropranolol
2570	GB 99
2580	GB 67
2590	(S)-1-(2-Amino-3-nitrophenoxy)-3-tert-butylamino-propan-2-ol
2700	4-(2-Keto-3-methyl-1-benzimidazolinyl)piperidine
2750	Cyclopropyl-p-nitrophenyl ketone
2760	FNMB
2800	3-O-Benzyl-naltrindole
2810	N-Methylnaltrindole

2830	QNB
2840	Me-QNB
2850	Benzyl-14-(R,S)-tosyloxy-6-thiaheptadecanoate
2860	14-(R,S)-Fluoro-6-thiaheptadecanoic acid
2869	2-O-(Trifluoromethylsulfonyl)-1,3,5-tri-O-benzoyl-α-L-ribofuranose
2870	2-O-(Trifluoromethylsulfonyl)-1,3,5-tri-O-benzoyl-α-D-ribofuranose
2871	5-Ethyl-2,4-bis[(trimethylsilyl)oxy]pyrimidine
2872	5-Methyl-2,4-bis[(trimethylsilyl)oxy]pyrimidine
2873	Bis(trimethylsilyl)cytosine
2874	L-FEAU
2875	α-L-FEAU
2876	FEAU
2877	αFEAU
2878	FMAU
2879	αFMAU
2880	FTRU
2890	FTAU
2900	FAU
2910	FIAU
2920	FUdR
2921	Di-THP-nosyl-AUR
2922	FIRU
2930	FAC
2931	αFAC
2940	3′-Fluoro-2′,3′-dideoxyuridine
2948	5-Trimethylstannyl-2′-deoxyuridine
2949	IUdR
2950	2′-Deoxy-L-uridine
2952	Nitro-Xeloda
2953	Xeloda
2954	2′,3′-Didehydro-3′-deoxythymidine
2958	5-Fluorouracil precursor
2960	Tosyl-FHBG
2970	FHBG
3000	N,O-Di-Boc-2-TMSn-L-tyrosine ethyl ester
3010	2-Fluoro-tyrosine
3020	2-Iodo-tyrosine
3035	Thyronamine Hydrochloride
3036	3-Iodothyronamine Hydrochloride
3050	TET
3051	TET (GMP)
3052	TET (GMP)
3061	FET hydrochloride
3071	D-FET hydrochloride
3081	(L)-HET hydrochloride
3100	N-Trifluoroacetyl-5-acetoxy-2-trimethylstannyl-phenylalanine ethyl ester
3110	N,O-Di-Boc-2-TMSn-m-tyrosine ethyl ester
3130	2-Fluoro-m-Tyrosine
3180	2-Iodo-α-methyl-p-tyrosine
3190	3-Iodo-α-methyl-p-tyrosine
3191	(S)-tert-Butyl 2-((tert-butoxycarbonyl) amino)-4-Iodobutanoat
3200	WAY 100634

3210	WAY 100635
3220	Desmethyl-WAY100635
3230	Desmethyl-WAY 100634
3240	Nitro-MPPF
3250	MPPF
3260	Desmethyl-MPT
3270	MPT
3300	TAP
3310	IAP
3320	Nitro-AP
3340	FAP tartrate
3350	TMA-AP
3351	(-)-Flubatine standard
3353	(-)-Flubatine precursor
3354	(-)-Flubatine precursor (GMP)
3355	(+)-Flubatine standard
3357	(+)-Flubatine precursor
3358	(+)-Flubatine precursor (GMP)
3371	ASEM precursor
3380	Metaraminol (free base)
3390	Metaraminol bitartrate
3400	MHED hydrochloride
3500	Desmethyl-GR 205171
3510	GR 205171
3520	Desmethyl-GR 205171 Dihydrochloride
3530	GR 205171 Dihydrochloride
3540	Desmethyl-CNS 5161
3550	CNS 5161
3560	Desmethyl ABP688
3561	Desmethyl ABP688 (GMP)
3570	ABP688
3571	FPEB precursor
3572	FPEB standard
3590	ISOM
3591	ISOF
3700	Desmethyl-SCH-442416
3710	SCH-442416
3720	Desmethyl-MK-8278
3750	CPTPX
3751	CPFPX
4000	(-)-2-beta-Carbomethoxy-3-beta-(4-fluorophenyl)tropane
4020	(-)-2-beta-Carbomethoxy-3-beta-(4-fluorophenyl)nortropane
4030	(-)-2-beta-Carbomethoxy-3-beta-(4-iodophenyl)tropane
4040	TMS-CT
4041	TBS-CT
4050	(-)-2-beta-Carbomethoxy-3-beta-(4-iodophenyl)nortropane
4060	(-)-2-beta-Carbomethoxy-3-beta-(phenyl)tropane
4100	CITFES
4110	CITFE
4122	CITTP Tosylate
4130	CITFP
4132	TBSCT-FP

4140	beta-CIT acid
4150	2-FE-beta-CIT
4160	PE2I acid
4165	PE2I tin precursor
4170	PE2I
4172	TEO-PE2I
4173	FE-PE2I
4180	Nor-beta-CCIT
4190	FECNT
4200	Altropane acid
4201	Altropane acid hydrochloride
4210	Altropane
4211	Altropane hydrochloride
4230	Norbenztropine
4231	Benztropine Mesylate
4300	MASB
4301	MASB (GMP)
4310	DASB
4311	DASB (GMP)
4320	AFM precursor
4330	AFM standard
4360	(+)-McN 5652 Thiobutyrate
4370	(+)-McN 5652
4380	(-)-McN 5652
4381	(+)-Fluoromethyl-McN 5652
4383	FBAM precursor
4384	FBAM standard
4385	CPTMA
4386	CMTMA
4389	TBAB
4390	PMBAB
4391	FB precursor
4392	SFB
4393	[^{18}F]FPyBrA/[^{18}F]FPyME precursor
4394	FPyME standard
4396	[^{18}F]FPyKYNE precursor
4397	FPyKYNE
4398	FBEM precursor
4399	FBEM standard
4400	(2S,3S)-N-Boc-norethylreboxetine
4402	(2S,3S)-N-Boc-carboxylreboxetine
4403	(2S,3S)-Carboxylreboxetine fluoroethyl ester trifluoroacetate
4405	Methylreboxetinecarboxylate
4406	(2S,3S)-Methylreboxetine
4407	(2S,3S)-Desethylreboxetine
4500	Norbinaltorphimine dihydrochloride
4600	(-)-TEBV
4610	(-)-FEBV
4700	(±)-9-O-Desmethyl-α-dihydrotetrabenazine
4710	(+)-9-O-Desmethyl-α-dihydrotetrabenazine
4720	(-)-9-O-Desmethyl-α-dihydrotetrabenazine
4730	(±)-α-Dihydrotetrabenazine

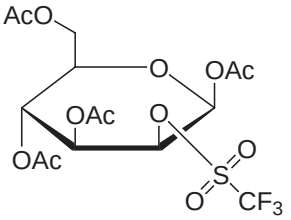
4731	(±)-beta-Dihydrotetrabenazine
4732	(±)-Tetrabenazine
4733	(±)-9-O-Desmethyl-tetrabenazine
4900	Aminothiadiazine
4910	Chlorothiadiazine
5000	DMTEAN
5010	DFEAN
5020	DMEAN
5030	DMFEAN
5100	6-OH-BTA-0
5101	6-OH-BTA-0 (GMP)
5110	6-MOMO-BTA-0
5111	6-MOMO-BTA-0 (GMP)
5120	6-OH-BTA-1 hydrochloride
5130	6-MeO-BTA-0
5140	6-OH-BTA-1 (free base)
5149	6-O-Tosyloxyethyl-CBT
5150	[^{18}F]Lansoprazole Precursor
5165	Astemizole
5166	O-Desmethyl Astemizole
5200	Desmethyl-PD 153035
5210	PD 153035
5600	Norverapamil
5620	(-)-Norverapamil
5630	(+)-Verapamil hydrochloride
5700	N-Demethylrifampicin
6000	Rolipram
6010	(S)-(+)-Rolipram
6020	(R)-(-)-Rolipram
6030	Desmethyl-Rolipram
6040	(S)-(+)-Desmethyl-Rolipram
6050	(R)-(-)-Desmethyl-Rolipram
6100	Dimethylaminoethanol
6120	Fluoroethylcholine tosylate
6130	Fluoromethylcholine chloride
6140	Fluoromethylcholine bromide
6141	Bromocholine bromide
6150	Choline chloride
6160	Fluoroethylcholine chloride
6170	Choline iodide
6173	DMMB
6174	BHTMEDA
6175	Dibromoethane
6176	Dibromomethane
6177	Bis(tosyloxy)methane
6179	1,2-Bis(nosyloxy)ethane
6180	1,2-Bis(tosyloxy)ethane
6181	2-Bromoethyl nosylate
6182	2-Bromoethyl triflate
6183	2-Bromoethyl tosylate
6184	2-Fluoroethyl tosylate
6185	Bis(tosyl)-1,4-butanediol

6186	1,4-Bis(tosyloxy)but-2-yne
6190	3-Fluoropropyltosylate
6191	1,3-Propane-di-tosylate
6194	Fluoromethyl tosylate
6200	Ethyl (p-tosyloxy)acetate
6210	Potassium fluoroacetate
6211	Sodium fluoroacetate
6221	DBCO-SCN
6301	1-Tosyloxy-3-butyne
6302	1-Tosyloxy-4-pentyne
6303	1-Tosyloxy-5-hexyne
6305	Tosyl-propargyl-diethylene glycol
6307	Tosyl-propargyl-triethylene glycol
6308	Fluoro-propargyl-triethylene glycol
6320	3-(4-Azidophenoxy)propyl methansulfonate
6351	(S)-O-Tosyl-1,2-Epoxybutanol
6500	Dimethyl-8-acetyl-hexahydropyrrolo[2,3]indol-1,2-dicarboxylate
6510	α-Methyl-L-tryptophan
6520	Dimethyl-8-phenylsulfonyl-5-phenylsulfonyloxy-hexahydropyrrolo[2,3]indol-1,2-dicarboxylate
6532	5-FEHTP hydrochloride
7000	MIBG Hemisulfate
7001	MIBG Hemisulfate (GMP)
7010	MTMSBG
7012	TMSnBG
7014	SGMIB Standard
7015	SGMIB Precursor
7020	CNS 1261
7030	TBS-CNS 1261
7033	MFBG pinacol boronate precursor
7034	MFBG hydrochloride
7050	Mebrofenin
7060	Disofenin
7080	Succinimidyl-N-Boc-Hynic
7090	Succinimidyl-Hynic hydrochloride
7100	S-Benzoyl-MAG-3
7110	MAG 3
7111	(Benzoylmercapto)acetic acid
7150	BMEDA
7160	MDP
7161	HMDP
7165	EDTMP
7200	MIBI
7210	Copper tetraMIBI tetrafluoroborate $[Cu(MIBI)_4]BF_4$
7211	Copper tetraMIBI tetrafluoroborate (GMP)
7220	Zinc-TBI
7250	EC
7260	ECD
7270	TFP-N-sucDf-Fe
7281	TACN
7284	PrP9
7290	Cyclen
7300	DOTA

7301	DOTAEt
7310	Tetrofosmin
7312	Disodium sulfosalicylate
7320	BPAMD
7330	HBED-CC-tris(tBu)ester
7331	HBED-CC-di(tBu)ester
7400	TRODAT
7500	S-(-)-BZM
7510	S-(-)-IBZM
7520	Gallium Citrate (complex)
7600	16-Iodohexadecanoic acid
800	Cryptand 222
801	Lithium Aluminium Hydride in THF bulk
802	Lithium aluminium hydride (0.1 M in THF)
803	Lithium aluminium hydride (0.25 M in THF)
804	Lithium aluminium hydride (0.05 M in THF)
808	Tetrabutylammonium Hydrogen Carbonate (0.075 M) - Aqueous solution, stabilized with ethanol
831	Pentadecylmagnesium bromide 0.5 M in diethyl ether
832	Lithium aluminium hydride (0.1 M in THF)
9500	Fmoc-Lys(ivDde)-OH
9510	PMPA
9600	Ubiquicidin (29-41) acetate
9601	DOTA-Ubiquicidin (29-41) acetate
9602	Scrambled Ubiquicidin (29-41)
9603	NOTA-Ubiquicidin (29-41) acetate
9702	DOTATOC (GMP)
9703	Ga-DOTA-TOC acetate
9704	Y-DOTA-TOC
9705	Lu-DOTA-TOC
9712	DOTA-NOC acetate
9714	AMBA acetate
9715	DOTA-[Pro^{1},Tyr^{4}]bombesin (1-14)
9716	DOTA-NOC acetate (GMP)
9717	Ga-DOTA-NOC
9718	NODAGA-NOC acetate
9721	HYNIC-TOC trifluoroacetate
9730	HYNIC-NOC trifluoroacetate
9740	Pentreotide trifluoroacetate
9744	DTPA-TOC trifluoroacetate
9750	Octreotide acetate
9752	[Nal^{3}]Octreotide acetate
9760	TETA-Octreotide acetate
9762	NOTA-Octreotide trifluoroacetate
9765	NOTA-NOC acetate
9771	Gluc-[Lys^{0},$Lys(ivDde)^{5}$]-TOCA
9772	DOTA-TATE acetate (GMP)
9773	Ga-DOTA-TATE
9774	[Tyr^{3}]Octreotate acetate
9778	Gluc-Lys(FP)-TOCA
9782	ICG-TATE
9790	Galacto-RGD
9800	Fluoropropionyl-Galacto-RGD

9802	NOTA-RGDfK acetate
9803	Ga-NODAGA-RGD dimer
9804	NODAGA-RGD dimer acetate
9805	NODAGA-RGD trifluoroacetate
9806	NODAGA-RGD (GMP)
9807	Ga-NODAGA-RGD
9810	[Tyr^3]Octreotide acetate
9814	NODAGA-AMBA trifluoroacetate
9815	NOTA-AMBA trifluoroacetate
9816	[Pro^1,Tyr^4]bombesin (1-14)
9820	Lanreotide trifluoroacetate
9831	DOTA-Lanreotide acetate
9836	HYNIC-Lanreotide trifluoroacetate
9850	4-Formyl-N,N,N-Trimethylanilinium triflate
9855	DOTA-NAPamide trifluoroacetate
9857	DOTA-Sargastrin
9860	Cyclo-RGDfK
9861	Cyclo-RGDfK dimer trifluoroacetate
9862	DOTA-RGDfK dimer acetate
9863	DOTA-cyclo(RGDfK) acetate
9864	HYNIC-cyclo(RGDfK) trifluoroacetate
9866	DTPA-Bn-cyclo(RDGfK) dimer trifluoroacetate
9867	HYNIC-cyclo(RGDfK) dimer trifluoroacetate
9900	[Tyr^3,Lys^5(Boc)]octreotide acetate
9901	[Lys^5(Boc)]octreotate acetate
9902	[Lys^5(Boc)]lanreotide acetate
9903	[Nal^3,Lys^5(Boc)]octreotide acetate
9908	5(6)-FAM-TATE
9919	PSMA-11 (GMP)
9920	PSMA-11
9921	PSMA-11 (GMP)
9922	GaPSMA-11
9923	PSMA-10
9925	DCFPyL reference standard
9933	PSMA-617
9934	PSMA-617 (GMP)
9935	GaPSMA-617
9936	LuPSMA-617
9941	deprotected DCFPyL precursor
9943	PSMA-1007 precursor
99433	PSMA-1007 reference standard
9960	DOTA-Substance P
9960	DOTA-Substance P

Product List

Product Number	Product	Order number / Unit
100	**Mannose Triflate, ultra pure** **Precursor for [^{18}F]FDG (2-[^{18}F]Fluoro-2-deoxy-D-glucose)** $C_{15}H_{19}F_3O_{12}S$ **Molar Mass:** 480.37 [92051-23-5] Colourless or nearly colourless crystals packaged in 2 ml dark glass vials (DIN 2R) with teflon-faced rubber stoppers, center tear-off crimp caps (less than 100 mg) or dark glass screw cap vials (100 mg or more) argon flushed. Melting range 119 - 122 degC. Soluble in acetonitrile, acetone, DMSO, methanol. Insoluble in aqueous media. **Purity:** > 99 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra; HPLC; IR spectrum; melting point **Chemical Name:** CA index name: beta-D-mannopyranose, 1,3,4,6-tetraacetate 2-(trifluoromethane-sulfonate) **Synonymes:** TATM; mannose triflate; 1,3,4,6-tetra-O-acetyl-2-O-trifluoro-methanesulfonyl-beta-D-mannopyranose	**100.0020: 20 mg per vial** **100.0100: 100 mg per vial** **100.0400: 400 mg per vial** **100.1000: 1 g per vial** **Please inquire for customized filling and bulk quantities.** 

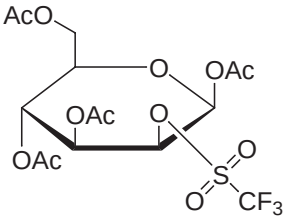
Literature:

Hamacher K. et al. Efficient stereospecific synthesis of no-carrier-added 2-[^{18}F]fluoro-2-deoxy-D-glucose using aminopolyether supported nucleophilic substitution. J. Nucl. Med. 1986, 27, 235-238.

Padgett H. et al. Computer-controlled radiochemical synthesis: a chemistry process control unit for the automated production of radiochemicals. Appl. Radiat. Isot. 1989, 40, 433-445.

Pavliak V. et al. A short synthesis of 1,3,4,6-Tetra-O-acetyl-2-azido-2-deoxy-beta-D-glucopyranose and the corresponding α-glucosyl chloride from D-mannose. Carbohydr. Res. 1991, 210, 333-337.

Chirakal R. Traces of fluorine containing impurities in the mannose triflate and their adverse effect on the radiochemical yield of 2-[^{18}F]FDG. XIIth ISRC. Uppsala, Sweden 1997, 214-216.

Product Number	Product	Order number / Unit
101	**Mannose Triflate, ultra pure** **Precursor for [^{18}F]FDG** **(2-[^{18}F]Fluoro-2-deoxy-D-glucose)** packing for GE TRACERlab MXFDG $C_{15}H_{19}F_3O_{12}S$ **Molar Mass:** 480.37 [92051-23-5] Colourless or nearly colourless crystals packaged in clear glass vials (10 ml headspace) with teflon-faced rubber stoppers, center tear-off crimp caps, argon flushed. Melting range 119 - 122 degC. Soluble in acetonitrile, acetone, DMSO, methanol. Insoluble in aqueous media. **Purity:** > 99 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra; HPLC; IR spectrum; melting point **Chemical Name:** CA index name: beta-D-mannopyranose, 1,3,4,6-tetraacetate 2-(trifluoromethane-sulfonate) **Synonymes:** TATM; mannose triflate; 1,3,4,6-tetra-O-acetyl-2-O-trifluoro-methanesulfonyl-beta-D-mannopyranose	**101.0020: 20 mg per vial** **101.0025: 25 mg per vial** **101.0040: 40 mg per vial** **101.0062: 62 mg per vial** **Please inquire for customized filling and bulk quantities.** 

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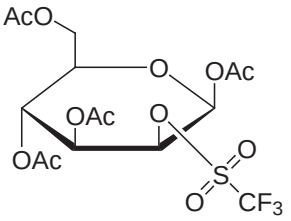
Chirakal R. Traces of fluorine containing impurities in the mannose triflate and their adverse effect on the radiochemical yield of 2-[^{18}F]FDG. XIIth ISRC. Uppsala, Sweden 1997, 214-216.

Product Number	Product	Order number / Unit
102	**Mannose Triflate, ultra pure** **Precursor for [^{18}F]FDG** **(2-[^{18}F]Fluoro-2-deoxy-D-glucose)**	**102.0030: 30 mg per vial** **Please inquire for customized filling and bulk quantities.**



packing for FDG MicroLab (GE)

$C_{15}H_{19}F_3O_{12}S$ **Molar Mass:** 480.37

[92051-23-5]

Colourless or nearly colourless crystals packaged in 2 ml dark glass vials (for GE Microlab) with teflon-faced rubber stoppers, tear-off crimp caps, argon flushed.

Melting range 119 - 122 degC. Soluble in acetonitrile, acetone, DMSO, methanol. Insoluble in aqueous media.

Purity: > 99 %

Certificates:
CoA; ^{1}H and ^{19}F NMR spectra; HPLC; IR spectrum; melting point

Chemical Name:
CA index name: beta-D-mannopyranose, 1,3,4,6-tetraacetate 2-(trifluoromethane-sulfonate)

Synonymes:
TATM; mannose triflate; 1,3,4,6-tetra-O-acetyl-2-O-trifluoro-methanesulfonyl-beta-D-mannopyranose

Literature:

Hamacher K. et al. Efficient stereospecific synthesis of no-carrier-added 2-[^{18}F]fluoro-2-deoxy-D-glucose using aminopolyether supported nucleophilic substitution. J. Nucl. Med. 1986, 27, 235-238.

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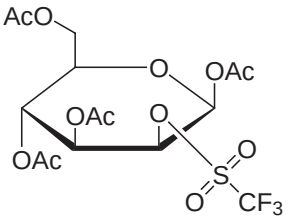
Chirakal R. Traces of fluorine containing impurities in the mannose triflate and their adverse effect on the radiochemical yield of 2-[^{18}F]FDG. XIIth ISRC. Uppsala, Sweden 1997, 214-216.

Product Number	Product	Order number / Unit
105	**Mannose Triflate PLUS, ultra pure** **Precursor for [^{18}F]FDG (2-[^{18}F]Fluoro-2-deoxy-D-glucose)** Manufactured according to GMP requirements for APIs (ICH Q7) Pharmaceutical grade (EDMF/DMF) $C_{15}H_{19}F_3O_{12}S$ **Molar Mass:** 480.37 [92051-23-5] Colourless or nearly colourless crystals packaged in 2 ml dark glass vials (DIN 2R) with teflon-faced rubber stoppers, tear-off crimp caps, argon flushed. Melting range 119 - 122 degC. Soluble in acetonitrile, acetone, DMSO, methanol. Insoluble in aqueous media. **Purity:** > 99 % **Certificates:** CoA with ^{1}H, ^{19}F NMR, and IR spectra, specific optical rotation and melting point (identity), HPLC, GC, and thermogravimetry (chemical purity); testing for bacterial endotoxines and sterility (microbiological purity) **Chemical Name:** CA index name: beta-D-mannopyranose, 1,3,4,6-tetraacetate 2-(trifluoromethane-sulfonate) **Synonymes:** TATM; mannose triflate; 1,3,4,6-tetra-O-acetyl-2-O-trifluoro-methanesulfonyl-beta-D-mannopyranose	**105.0020: 20 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Hamacher K. et al. Efficient stereospecific synthesis of no-carrier-added 2-[^{18}F]fluoro-2-deoxy-D-glucose using aminopolyether supported nucleophilic substitution. J. Nucl. Med. 1986, 27, 235-238.

Padgett H. et al. Computer-controlled radiochemical synthesis: a chemistry process control unit for the automated production of radiochemicals. Appl. Radiat. Isot. 1989, 40, 433-445.

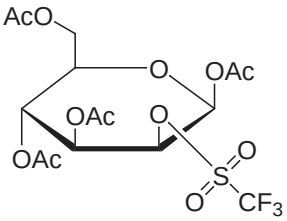
Pavliak V. et al. A short synthesis of 1,3,4,6-Tetra-O-acetyl-2-azido-2-deoxy-beta-D-glucopyranose and the corresponding α-glucosyl chloride from D-mannose. Carbohydr. Res. 1991, 210, 333-337.

Chirakal R. Traces of fluorine containing impurities in the mannose triflate and their adverse effect on the radiochemical yield of 2-[^{18}F]FDG. XIIth ISRC. Uppsala, Sweden 1997, 214-216.

Product Number	Product	Order number / Unit
107	**Mannose Triflate PLUS, ultra pure** **Precursor for [^{18}F]FDG** **(2-[^{18}F]Fluoro-2-deoxy-D-glucose)** Manufactured according to GMP requirements for APIs (ICH Q7) Pharmaceutical grade (EDMF/DMF)	**107.0020: 20 mg per vial** **107.0025: 25 mg per vial** **107.0040: 40 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_{15}H_{19}F_3O_{12}S$ **Molar Mass:** 480.37

[92051-23-5]



Colourless or nearly colourless crystals packaged in clear glass vials (10 ml headspace) with teflon-faced rubber stoppers, tear-off crimp caps, argon flushed.

Melting range 119 - 122 degC. Soluble in acetonitrile, acetone, DMSO, methanol. Insoluble in aqueous media.

Purity: > 99 %

Certificates:
CoA with ^{1}H, ^{19}F NMR, and IR spectra, specific optical rotation and melting point (identity), HPLC, GC, and thermogravimetry (chemical purity); testing for bacterial endotoxines and sterility (microbiological purity)

Chemical Name:
CA index name: beta-D-mannopyranose, 1,3,4,6-tetraacetate 2-(trifluoromethane-sulfonate)

Synonymes:
TATM; mannose triflate; 1,3,4,6-tetra-O-acetyl-2-O-trifluoro-methanesulfonyl-beta-D-mannopyranose

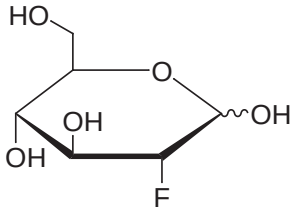
Literature:

Hamacher K. et al. Efficient stereospecific synthesis of no-carrier-added 2-[^{18}F]fluoro-2-deoxy-D-glucose using aminopolyether supported nucleophilic substitution. J. Nucl. Med. 1986, 27, 235-238.

Padgett H. et al. Computer-controlled radiochemical synthesis: a chemistry process control unit for the automated production of radiochemicals. Appl. Radiat. Isot. 1989, 40, 433-445.

Pavliak V. et al. A short synthesis of 1,3,4,6-Tetra-O-acetyl-2-azido-2-deoxy-beta-D-glucopyranose and the corresponding α-glucosyl chloride from D-mannose. Carbohydr. Res. 1991, 210, 333-337.

Chirakal R. Traces of fluorine containing impurities in the mannose triflate and their adverse effect on the radiochemical yield of 2-[^{18}F]FDG. XIIth ISRC. Uppsala, Sweden 1997, 214-216.

Product Number	Product	Order number / Unit
1100	**FDG** **Reference standard for [^{18}F]FDG (2-[^{18}F]Fluoro-2-deoxy-D-glucose)** $C_6H_{11}FO_5$ **Molar Mass:** 182.15 [86783-82-6] (cyclic form) [29702-43-0] (aldehyde form) Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: D-Glucopyranose, 2-deoxy-2-fluoro- **Synonymes:** 2-Deoxy-2-fluoro-D-glucose, 2-Deoxy-fluoro-glucose; Fludeoxyglucose	**1100.0010: 10 mg per vial** **1100.0020: 20 mg per vial** **1100.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

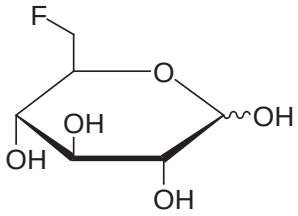
Literature:

Hamacher K. et al. Efficient stereospecific synthesis of no-carrier-added 2-[^{18}F]fluoro-2-deoxy-D-glucose using aminopolyether supported nucleophilic substitution. J. Nucl. Med. 1986, 27, 235-238.

Padgett H.C. et al. Computer-controlled radiochemical synthesis: a chemistry process control unit for the automated production of radiochemicals. Appl. Radiat. Isot. 1989, 40, 433-45.

Tóth G. et al. Synthesis of 2-deoxy-2-[^{18}F]Fluoro-D-glucose and its precursors for human diagnostics. Izotóptechnika, Diagnosztika 1992, 35, 65-72.

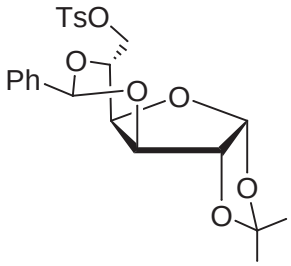
Füchtner F. et al. Basic Hydrolysis of 2-[^{18}F]Fluoro-1,3,4,6-tetra-O-acetyl-D-glucose in the Preparation of 2-[^{18}F]Fluoro-D-glucose. Appl. Radiat. Isot. 1996, 47, 61-66.

Product Number	Product	Order number / Unit
1108	**6-Deoxy-6-fluoro-D-glucopyranose** **Reference standard for 6-[^{18}F]Fluoro-6-deoxy-D-glucose** $C_6H_{11}FO_5$ **Molar Mass:** 182.15 [34168-77-9] pyranoside [4536-08-7] open-chain Colourless or nearly colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H, ^{13}C and ^{19}F NMR spectra **Chemical Name:** CA index name: D-glucopyranose, 6-deoxy-6-fluoro- **Synonymes:** 6-Deoxy-6-fluoro-D-glucose; 6-Deoxy-6-fluoro-D-glucopyranose; 6-FDG	**1108.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Neal T.R. et al. Synthesis of [^{18}F]-6-deoxy-6-fluoro-D-glucose ([^{18}F]6-FDG), a potential tracer of glucose transport. J. Labelled. Compds. Radiopharm. 2005, 48, 845-854.

Spring-Robinson C. et al. Uptake of 18F-labeled 6-fluoro-6-deoxy-D-glucose by skeletal muscle is responsive to insulin stimulation. J. Nucl.Med. 2009, 50, 912-919.

Product Number	Product	Order number / Unit
1109	**6-FDG precursor** **Precursor for 6-[^{18}F]FDG (6-[^{18}F]Fluoro-6-deoxy-D-glucose)** $C_{23}H_{26}O_8S$ **Molar Mass:** 462.51 [899808-81-2] Colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: 3,5-O-Benzylidene-1,2-O-isopropylidene-6-O-tosyl-α-D-glucofuranose **Synonymes:** α-D-Glucofuranose, 1,2-O-(1-methylethylidene)-3,5-O-[(S)-phenylmethylene]-, 4-methylbenzenesulfonate **Literature:** Blakely R.L. et al. 6-Fluoro-6-deoxy-D-glucose as a Tracer of Glucose Transport. Biochem. Preparations 1960, 7, 39-44. Neal T.R. et al. Synthesis of [^{18}F]-6-deoxy-fluoro-D-glucose ([^{18}F]6-FDG), a potential tracer of glucose transport. J. Labelled Compd. Radiopharm. 2005, 48, 845-854.	**1109.0010: 10 mg per vial** **1109.0020: 20 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1110	**ClDG** **Reference standard for byproduct of [^{18}F]FDG synthesis (2-[^{18}F]Fluoro-2-deoxy-D-glucose)**	**1110.0010: 10 mg per vial** **1110.0020: 20 mg per vial** **Please inquire for customized filling and bulk quantities.**

Caution, hygroscopic!

$C_6H_{11}ClO_5$ **Molar Mass:** 198.6

[14685-79-1]

Colourless to nearly colourless solid packaged in dark glass screw cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H and ^{13}C NMR spectra

Chemical Name:
CA index name: D-Glucose, 2-chloro-2-deoxy-

Synonymes:
2-Chloro-2-deoxy-D-glucose; 2-Chloro-DG; ClDG; 2-ClDG

Literature:
Alexoff D.L. et al. Ion chromatographic analysis of high specific activity [^{18}F]FDG preparations and detection of the chemical impurity 2-deoxy-2-chloro-D-glucose. Appl. Radiat. Isot. 1992, 43, 1313-1322.

Colville C.A. et al. Analysis of the structural requirements of sugar binding to the liver, brain and insulin-responsive glucose transporters expressed in oocytes. Biochem. J. 1993, 294, 753-760.

Product Number	Product	Order number / Unit
1117	**Glucose Triflate** **Precursor for [^{18}F]FDM (2-[^{18}F]Fluoro-2-deoxy-D-mannose)**	**Please inquire for customized filling and bulk quantities.**

$C_{15}H_{19}F_3O_{12}S$ **Molar Mass:** 480.37

[113544-40-4]

Colourless crystals packaged in dark glass crimp cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H NMR spectrum

Chemical Name:
CA index name: 1,3,4,6-tetra-O-acetyl-2-Otrifluoromethanesulfonyl-α-D-glucopyranose

Synonymes:
TATG

Literature:
Furomoto S. et al. In Vitro and In Vivo Characterization of 2-Deoxy-2-18F-Fluoro-d-Mannose as a Tumor-Imaging Agent for PET. J. Nucl. Med. 2013, 54, 1354-1361.

Tahara N. et al. 2-deoxy-2-[^{18}F]fluoro-D-mannose positron emission tomography imaging in atherosclerosis. Nature Medicine 2014, 20, 215-219.

Product Number	Product	Order number / Unit
1118	**MBETG**	**Please inquire for customized filling and bulk quantities.**

Precursor for [^{18}F]FDM (2-[^{18}F]Fluoro-2-deoxy-D-mannose)

$C_{18}H_{23}F_3O_9S$ **Molar Mass:** 472.43

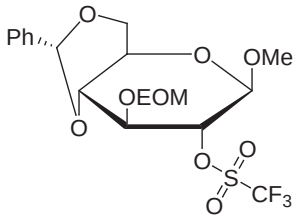
CAS-RN not yet assigned

Colourless crystals packaged in dark glass crimp cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H and ^{19}F NMR spectra

Chemical Name:
4,6-O-Benzylidene-3-O-ethoxymethyl-2-O-trifluoromethanesulfonyl-1-O-methyl-β-D-glucopyranoside



Synonymes:
n/a

Literature:
Furomoto S. et al. In Vitro and In Vivo Characterization of 2-Deoxy-2-18F-Fluoro-d-Mannose as a Tumor-Imaging Agent for PET. J. Nucl. Med. 2013, 54, 1354-1361.

Tahara N. et al. 2-deoxy-2-[^{18}F]fluoro-D-mannose positron emission tomography imaging in atherosclerosis. Nature Medicine 2014, 20, 215-219.

Product Number	Product	Order number / Unit
1119	**MBBTG**	**1119.0010: 10 mg per vial** **1119.0020: 20 mg per vial** **Please inquire for customized filling and bulk quantities.**

Precursor for [^{18}F]FDM (2-[^{18}F]Fluoro-2-deoxy-D-mannose)

$C_{22}H_{23}F_3O_8S$ **Molar Mass:** 504.47

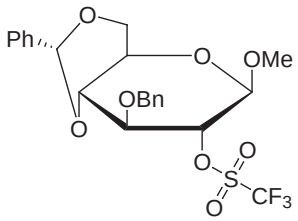
[107794-71-8]

Colourless powder packaged in dark glass crimp cap vials.

Purity: > 95 %

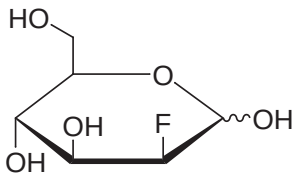
Certificates:
CoA; ^{1}H and ^{19}F NMR spectra

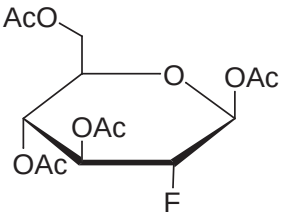
Chemical Name:
CA index name: beta-D-Glucopyranoside, methyl 3-O-(phenylmethyl)-4,6-O-[(R)-phenylmethylene]-, trifluoromethanesulfonate

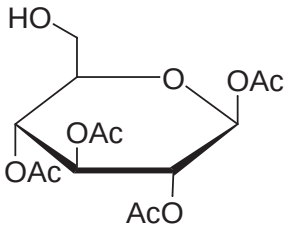


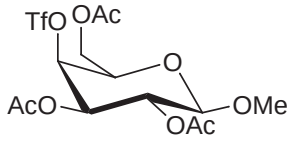
Synonymes:
β-D-Glucopyranoside, methyl 3-O-(phenylmethyl)-4,6-O-(phenylmethylene)-, trifluoromethanesulfonate, (R)-; Pyrano[3,2-d]-1,3-dioxin, β-D-glucopyranoside deriv.; Methyl 3-O-(phenylmethyl)-4,6-O-[(R)-phenylmethylene]-2-O-trifluoromethanesulfonyl-β-D-glucopyranoside; Methyl 3-O-benzyl-4,6-O-benzylidene-2-O-trifluoromethanesulfonyl-β-D-glucopyranoside

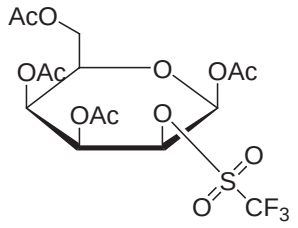
Literature:
Luxen A. et al. Stereospecific Approach to the Synthesis of [^{18}F]-2-Deoxy-2-Fluoro-D-Mannose. Int. J. Radiat. Appl. Instrum. Part A, Appl. Radiat. Isot. 1986, 37, 409-413.

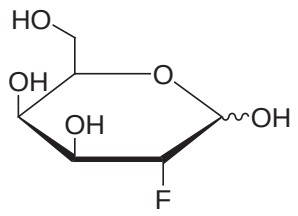
Product Number	Product	Order number / Unit
1120	**FDM** **Reference standard for byproduct of [^{18}F]FDG synthesis (2-[^{18}F]Fluoro-2-deoxy-D-glucose)** $C_6H_{11}FO_5$ **Molar Mass:** 182.15 [31077-88-0] Colourless to slightly coloured semisolid/solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: D-Mannopyranose, 2-deoxy-2-fluoro **Synonymes:** 2-Fluoro-2-deoxy-D-mannopyranose; 2-Deoxy-2-fluoro-D-mannopyranose **Literature:** Hamacher K. et al. Efficient stereospecific synthesis of no-carrier-added 2-[^{18}F]fluoro-2-deoxy-D-glucose using aminopolyether supported nucleophilic substitution. J. Nucl. Med. 1986, 27, 235-238.	**1120.0010: 10 mg per vial** **1120.0020: 20 mg per vial** **Please inquire for customized filling and bulk quantities.** 

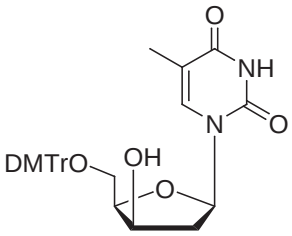
Product Number	Product	Order number / Unit
1130	**ACY-FDG** **Reference standard for byproduct of [^{18}F]FDG synthesis (2-[^{18}F]Fluoro-2-deoxy-D-glucose)** $C_{14}H_{19}FO_9$ **Molar Mass:** 350.29 [31077-89-1] Yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: D-Glucopyranose, 2-deoxy-2-fluoro-, tetraacetate **Synonymes:** 2-Fluoro-2-deoxy-glucose tetraacetate **Literature:** Kovac P. Short synthesis of 2-Deoxy-2-fluoro-D-glucose. Carbohydr. Res. 1986, 153, 168-170.	**1130.0010: 10 mg per vial** **1130.0020: 20 mg per vial** **Please inquire for customized filling and bulk quantities.** 

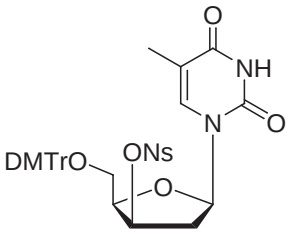
Product Number	Product	Order number / Unit
1131	**1,2,3,4-Tetra-O-acetyl-beta-D-glucopyranose** **TLC Standard for Testing of Radiochemical Purity of [^{18}F]FDG according to Ph. Eur. 6.2, 1325** $C_{14}H_{20}O_{10}$ **Molar Mass:** 348.3 [13100-46-4] Colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: beta-D-Glucopyranose, 1,2,3,4-tetraacetate **Synonymes:** Glucopyranose, 1,2,3,4-tetraacetate, β-D-; 1,2,3,4-Tetra-O-acetyl-β-D-glucopyranose; 1,2,3,4-Tetra-O-acetyl-β-D-glucose; 6-OH-TAG **Literature:** European Pharmacopoeia 6.2, 3678-3680.	**1131.0030: 30 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1138	**Me-4-FDG precursor** **Precursor for Me-4-[^{18}F]FDG** **Methyl 4-deoxy-4-[^{18}F]fluoro-β-D-glucopyranoside** $C_{14}H_{19}F_3O_{11}S$ **Molar Mass:** 452.36 [174618-11-2] Colourless to off-white solid packaged in dark glass vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: β-D-Galactopyranoside, methyl, 2,3,6-triacetate 4-(trifluoromethanesulfonate) **Synonymes:** Methyl 2,3,6-Tri-O-acetyl-4-O-triflyl-β-D-galactopyranoside **Literature:** Yu A.S. et al. Functional expression of SGLTs in rat brain. Am. J. Physiol. Cell. Physiol. 2010, 299, C1277-C1284.	**Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1140	**Talose Triflate** **Precursor for [^{18}F]FDGal (2-[^{18}F]Fluoro-2-deoxy-D-galactose)** $C_{15}H_{19}F_3O_{12}S$ **Molar Mass:** 480.37 CAS-RN not yet assigned Colourless or nearly colourless crystals packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** 1,3,4,6-Tetra-O-acetyl-2-O-trifluoromethanesulfonyl-β-D-talopyranose **Synonymes:** β-D-talopyranose, 1,3,4,6-tetraacetate 2-(trifluoromethanesulfonate) **Literature:** Fukuda H. et al. (F-18)-2-Deoxy-2-Fluoro-D-Galactose: A Potential Tracer for the Assessment of Sugar Metabolism in the Liver by Positron Emission Tomography. Cyric Annual Report 1982, 188-195.	**1140.0010: 10 mg per vial** **1140.0025: 25 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1150	**FDGal** **Reference standard for [^{18}F]FDGal (2-[^{18}F]Fluoro-2-deoxy-D-galactose)** $C_6H_{11}FO_5$ **Molar Mass:** 182.15 [7226-39-3] Colourless solid to reddish foam packaged in dark glass screw cap vials. **Purity:** > 90 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 2-Deoxy-2-fluoro-D-galactose **Synonymes:** 2-Deoxy-2-fluoro-D-galactopyranose; 3-Fluoro-6-hydroxymethyl-tetrahydro-pyran-2,4,5-triol **Literature:** Barlow J. et al. Enzymatic synthesis of UDP-(3-deoxy-3-fluoro)-D-galactose and UDP-(2-deoxy-2-fluoro)-D-galactose and substrate activity with UDP-galactopyranose mutase. Carbohydr. Research 2000, 328, 473-480. Geilen C. et al. A simple synthesis of 2-Deoxy-2-fluoro-D-galactose using xenon difluoride, Tetrahedron Lett. 1992, 33, 2435-2438.	**1150.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

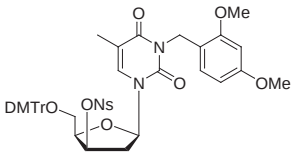
Product Number	Product	Order number / Unit
1180	**DMTr-lyxothymidine** **Precursor for [^{18}F]FLT** **(3´-Deoxy-3´-[^{18}F]fluorothymidine)** $C_{31}H_{32}N_2O_7$ **Molar Mass:** 544.6 [112501-53-8] Colourless amorphous solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 2,4(1H,3H)-Pyrimidinedione, 1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-2-deoxy-β-D-threo-pentofuranosyl]-5-methyl- **Synonymes:** 1-[5-O-(4,4´-Dimethoxytrityl)-2-deoxy-β-D-threo-pentofuranosyl]-thymine; DMTr-lyxothymidine; 2,4(1H,3H)-Pyrimidinedione, 1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-2-deoxy-β-D-threo-pentofuranosyl]-5-methyl-; 1-[5-O-[Bis(4-methoxyphenyl)phenylmethyl]-2-deoxy-D-threo-pentofuranosyl]-5-methyl-2,4(1H,3H)pyrimidinedione; 5´-O-(4,4´-Dimethoxytrityl)-3´-hydroxythymidine **Literature:** Eisenhut M. et al. A new precursor for the radiosynthesis of [^{18}F]FLT. Nucl. Med. Biol. 2002, 29, 263-273.	**1180.0010: 10 mg per vial** **1180.0020: 20 mg per vial** **1180.0025: 25 mg per vial** **1180.0030: 30 mg per vial** **1180.0040: 40 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1190	**DMTr-Nosyl-lyxothymidine** **Precursor for [^{18}F]FLT** **(3´-Deoxy-3´-[^{18}F]fluorothymidine)** $C_{37}H_{35}N_3O_{11}S$ **Molar Mass:** 729.75 [444717-20-8] Yellowish amorphous solid packaged in dark glass crimp cap vials. **Purity:** > 90 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 2,4(1H,3H)-Pyrimidinedione, 1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-2-deoxy-3-O-[(4-nitrophenyl)sulfonyl]- β-D-threo-pentofuranosyl]-5-methyl- **Synonymes:** 1-[5-O-(4,4´-Dimethoxytrityl)-3-O-nitrophenylsulfonyl-2-deoxy-β-D-lyxofuranosyl]thymine; 5´-O-Dimethoxytrityl-3´-O-nosyl-thymidine; 1-[5-O-(4,4´-Dimethoxytrityl)-3-O-nitrophenylsulfonyl-2-deoxy-β-D-threo-pentofuranosyl]-thymine; 2,4(1H,3H)-Pyrimidinedione, 1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-2-deoxy-3-O-[(4-nitrophenyl)sulfonyl]-β-D-threo-pentofuranosyl]-5-methyl-; Non-Boc-FLT	**1190.0010: 10 mg per vial** **1190.0020: 20 mg per vial** **1190.0025: 25 mg per vial** **1190.0030: 30 mg per vial** **1190.0040: 40 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Oh S.J. et al. High radiochemical yield synthesis of 3´-deoxy-3´-[^{18}F]Fluorothymidine using (5´-O-dimethoxytrityl-2´-deoxy-3´-O-nosyl-β-D-threo-pentofuranosyl)thymine and its 3-N-BOC-protected analogue as a labeling precursor. Nucl. Med. Biol. 2003, 30, 151-157.

Eisenhut M. et al. A new precursor for the radiosynthesis of [^{18}F]FLT. Nucl. Med. Biol. 2002, 29, 263-273.

Product Number	Product	Order number / Unit
1200	**Dimethoxybenzyl-FLT precursor** **Precursor for [^{18}F]FLT (3´-Deoxy-3´-[^{18}F]fluorothymidine)** $C_{46}H_{45}N_3O_{13}S$ **Molar Mass:** 879.93 [290371-75-4] Yellowish to yellow solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 2,4-(1H,3H)-Pyrimidinedione, 1-[5-O-[bis(4-methoxy-phenyl)phenylmethyl]-2-deoxy-3-O-[(4-nitrophenyl)sulfonyl]-β-D-threo-pentofuranosyl]-3-[(2,4-dimethoxyphenyl)methyl]-5-methyl- **Synonymes:** 3-N-(2,4-Dimethoxybenzyl)-1-[5-O-(4,4´-dimethoxytrityl)-3-O-nitrophenylsulfonyl-2-deoxy-β-D-lyxofuranosyl]thymidine; N-(2,4-Dimethoxybenzyl)-5´-O-dimethoxytrityl-3´-O-nosyl-thymidine; 2,4-(1H,3H)-Pyrimidinedione, 1-[5-O-[bis(4-methoxy-phenyl)phenylmethyl]-2-deoxy-3-O-[(4-nitrophenyl)sulfonyl]-β-D-threo-pentofuranosyl]-3-[(2,4-dimethoxyphenyl)methyl]-5-methyl-	**1200.0010: 10 mg per vial** **1200.0025: 25 mg per vial** **Please inquire for customized filling and bulk quantities.** 

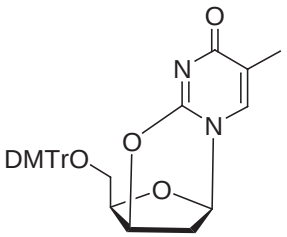
Literature:

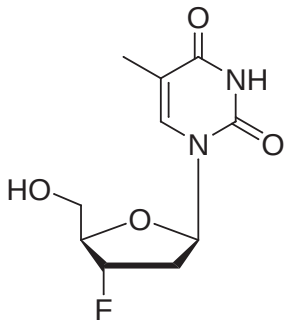
Shields A.F. et al. Imaging proliferation in vivo with [^{18}F]FLT and positron emission tomography. Nature Medicine 1998, 4, 1334-1336.

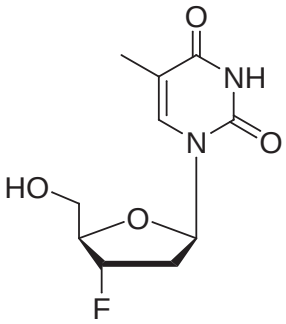
Grierson J.R. et al. Developments in the radiosynthesis of [^{18}F]FLT. J. Nucl. Med. 1998, 39, Proceedings of the 45th Annual Meeting, Toronto, Ontario, Canada; 22 P. No. 76.

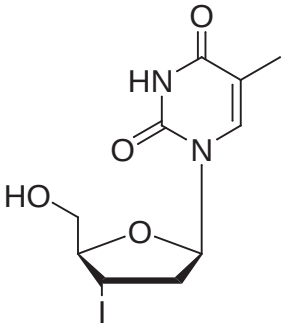
Grierson J.R. et al. An improved radiosynthesis of [^{18}F]FLT. J. Labelled Compd. Radiopharm. 1999, 42, Suppl. 1, S525.

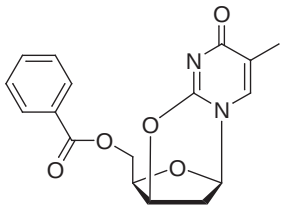
Grierson J.R. et al. Radiosynthesis of 3´-deoxy-3´-[^{18}F]fluoro-thymidine: [^{18}F]FLT for imaging of cellular proliferation in vivo. Nucl. Med. Biol. 2000, 27, 143-156.

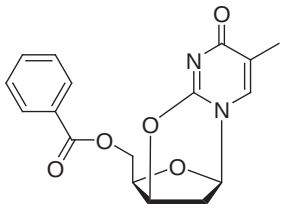
Product Number	Product	Order number / Unit
1210	**Anhydrothymidine-FLT precursor** **Precursor for [^{18}F]FLT (3´-Deoxy-3´-[^{18}F]fluorothymidine)** $C_{31}H_{30}N_2O_6$ **Molar Mass:** 526.58 [191474-13-2] Colourless to yellowish solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum; HPLC **Chemical Name:** CA index name: 2,5-Methano-5H,9H-pyrimido[2,1-b][1,5,3]dioxazepin-9-one, 3-[4,4´-dimethoxtrityl]-2,3-dihydro-8-methyl-, (2R,3R,5R)- **Synonymes:** 5´-O-(4,4´-dimethoxytrityl)-2,3´-anhydrothymidine; 2,5-Methano-5H,9H-pyrimido[2,1-b][1,5,3]dioxazepin-9-one, 3-[4,4´-dimethoxtrityl]-2,3-dihydro-8-methyl-, (2R,3R,5R)-; (2R,3R,5R)-3-[[Bis(4-methoxyphenyl)phenylmethoxy]methyl]-2,3-dihydro-8-methyl- 2,5-methano-5H,9H-pyrimido[2,1-b][1,5,3]dioxazepin-9-one **Literature:** Machulla H.J. et al. Simplified labelling approach for synthesizing 3´-deoxy-3´-[^{18}F]fluorothymidine ([^{18}F]FLT). J. Radioanl. Nucl. Chem. 2000, 243, 843-846. Eisenhut M. et al. Synthesis of 3´-deoxy-3´-[^{18}F]fluorothymidine with 2,3´-anhydro-5´-O-(4,4´-dimethoxytrityl)-thymidine. J. Labelled Compd. Radiopharm. 2000, 43, 1211-1218.	**1210.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

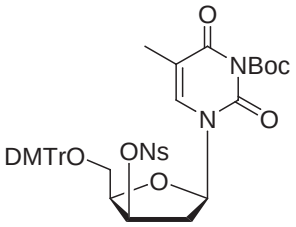
Product Number	Product	Order number / Unit
1219	**FLT Ultra Pure** **Reference standard for [^{18}F]FLT (3´-Deoxy-3´-[^{18}F]fluorothymidine)** $C_{10}H_1FN_2O_4$ **Molar Mass:** 244.22 [25526-93-6] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 99 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra; HPLC **Chemical Name:** CA index name: Thymidine, 3´-deoxy-3´-fluoro- **Synonymes:** 1-(3´-Deoxy-3´-fluoro-β-D-pentofuranosyl)thymine; 3´-Deoxy-3´-fluorothymidine; 3´-Fluorodeoxythymidine; 3´-Fluorothymidine; Alovudine; CL 184824; 3´-Fluoro-3´-deoxythymidine **Literature:** Eisenhut M. et al. Synthesis of 3´-deoxy-3´-[^{18}F]fluorothymidine with 2,3´-anhydro-5´-O-(4,4´-dimethoxytrityl)-thymidine. J. Labelled Compd. Radiopharm. 2000, 43, 1211-1218. Machulla H.J. et al. Simplified labelling approach for synthesizing 3´-deoxy-3´-[^{18}F]fluorothymidine ([^{18}F]FLT). J. Radioanl. Nucl. Chem. 2000, 243, 843-846.	**1219.0005: 5 mg per vial** **1219.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

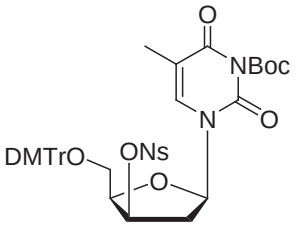
Product Number	Product	Order number / Unit
1220	**3´-Fluoro-thymidine (FLT)** **Reference standard for [^{18}F]FLT (3´-Deoxy-3´-[^{18}F]fluorothymidine)** $C_{10}H_{13}FN_2O_4$ **Molar Mass:** 244.22 [25526-93-6] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: Thymidine, 3´-deoxy-3´-fluoro- **Synonymes:** 1-(3´-Deoxy-3´-fluoro-β-D-pentofuranosyl)thymine; 3´-Deoxy-3´-fluorothymidine; 3´-Fluorodeoxythymidine; 3´-Fluorothymidine; Alovudine; CL 184824; 3´-Fluoro-3´-deoxythymidine **Literature:** Eisenhut M. et al. Synthesis of 3´-deoxy-3´-[^{18}F]fluorothymidine with 2,3´-anhydro-5´-O-(4,4´-dimethoxytrityl)-thymidine. J. Labelled Compd. Radiopharm. 2000, 43, 1211-1218.	**1220.0010: 10 mg per vial** **1220.0020: 20 mg per vial** **1220.0050: 50 mg per vial** **1220.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

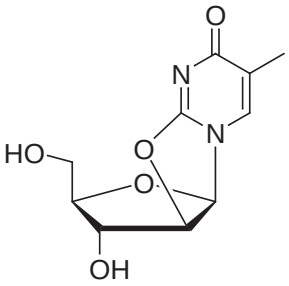
Product Number	Product	Order number / Unit
1222	**3´-Iodo-thymidine** $C_{10}H_{13}IN_2O_4$ **Molar Mass:** 352.13 [14260-82-3] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Thymidine, 3´-deoxy-3´-iodo **Synonymes:** 3´-Deoxy-3´-iodothymidine; 3´-Iodothymidine **Literature:** Verheyden J.P.H. et al. Halo Sugar Nucleosides. II. Iodination of Secondary Hydroxyl Groups of Nucleosides with Methyltriphenoxyphosphonium Iodide J. Org. Chem. 1970, 35, 2868-2877. Herdewijn P. et al. 3´-Substituted 2´,3´-dideoxynucleoside analogues as potential anti-HIV (HTLV-III/LAV) agents. J. Med. Chem. 1987, 30, 1270-1278. Chu C.K. et al. Structure-activity relationships of pyrimidine nucleosides as antiviral agents for human immunodeficiency virus type 1 in peripheral blood mononuclear cells. J. Med. Chem. 1989, 32, 612-17	**1222.0010: 10 mg per vial** **1222.0020: 20 mg per vial** **Please inquire for customized filling and bulk quantities.** 

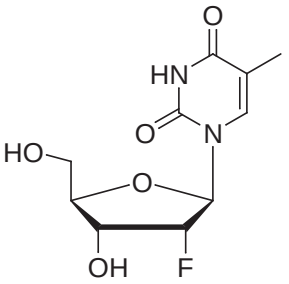
Product Number	Product	Order number / Unit
1230	**5´-O-Benzoyl-2,3´-anhydrothymidine** **Precursor for [^{18}F]FLT** **(3´-Deoxy-3´-[^{18}F]fluorothymidine)** $C_{17}H_{16}N_2O_5$ **Molar Mass:** 328.32 [70838-44-7] White solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum; HPLC **Chemical Name:** CA index name: 2,5-Methano-5H,9H-pyrimido[2,1-b][1,5,3]dioxazepin-9-one, 3-[(benzoyloxy)methyl]-2,3-dihydro-8-methyl-, (2R,3R,5R)- **Synonymes:** 5´-O-Benzoyl-2,3´-anhydrothymidine; 2,5-Methano-5H,9H-pyrimido[2,1-b][1,5,3]dioxazepin-9-one, 3-[(benzoyloxy)methyl]-2,3-dihydro-8-methyl-, (2R,3R,5R)-; (2R,3R,5R)-3-[(benzoyloxy)methyl]-2,3-dihydro-8-methyl-2,5-methano-5H,9H-pyrimido[2,1-b][1,5,3]dioxazepin-9-one; BATH **Literature:** Machulla H.J. et al. Procedure for Routine Synthesis of [^{18}F]FLT in High Activities. J. Nucl. Med. 2001, 42, 257P.	**1230.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

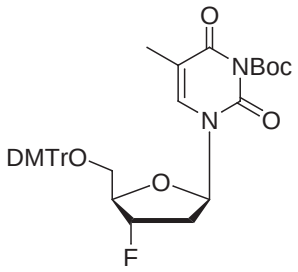
Product Number	Product	Order number / Unit
1231	**5´-O-Benzoyl-2,3´-anhydrothymidine (GMP)** **Precursor for [^{18}F]FLT** **(3´-Deoxy-3´-[^{18}F]fluorothymidine)** Manufactured according to GMP requirements for APIs for use in clinical trials (ICH Q7 chapter 19) $C_{17}H_{16}N_2O_5$ **Molar Mass:** 328.32 [70838-44-7] White solid packaged in dark glass crimp cap vials. **Purity:** > 99 % **Certificates:** CoA with NMR and IR spectra (identity); HPLC (purity); GC (residual solvents) **Chemical Name:** CA index name: 2,5-Methano-5H,9H-pyrimido[2,1-b][1,5,3]dioxazepin-9-one, 3-[(benzoyloxy)methyl]-2,3-dihydro-8-methyl-, (2R,3R,5R)- **Synonymes:** 5´-O-Benzoyl-2,3´-anhydrothymidine; 2,5-Methano-5H,9H-pyrimido[2,1-b][1,5,3]dioxazepin-9-one, 3-[(benzoyloxy)methyl]-2,3-dihydro-8-methyl-, (2R,3R,5R)-; (2R,3R,5R)-3-[(benzoyloxy)methyl]-2,3-dihydro-8-methyl-2,5-methano-5H,9H-pyrimido[2,1-b][1,5,3]dioxazepin-9-one; BATH **Literature:** Same as product number 1230.	**1231.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1240	**3-N-Boc-5´-O-dimethoxytrityl-3´-O-nosyl-thymidine** **Precursor for [^{18}F]FLT** **(3´-Deoxy-3´-[^{18}F]fluorothymidine)** Sold under license for patent EP1355915 $C_{42}H_{43}N_3O_{13}S$ **Molar Mass:** 829.87 [444717-23-1] Yellowish solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 1(2H)-Pyrimidinecarboxylic acid, 3-[2-deoxy-3-O-[(4-nitrophenyl)sulfonyl]-5-O-(triphenylmethyl)-β-D-threo-pentofuranosyl]-3,6-dihydro-5-methyl-2,6-dioxo-, 1,1-dimethylethyl ester **Synonymes:** 3-N-Boc-5´-O-dimethoxytrityl-3´-O-nosyl-thymidine; 3-N-Boc-1-[5-O-(4,4´-dimethoxytrityl)-3-O-nitrophenylsulfonyl-2-deoxy-β-D-lyxofuranosyl]thymidine; 1-(2´-Deoxy-3´-O-(4-nitrobenzenesulfonyl)-5´-O-(4,4´-dimethoxytrityl)-β-D-threo-pentafuranosyl)-3-(tert-butyloxycarbonyl)thymine; Boc-FLT-Precursor; Boc-FLT **Literature:** Mosdzianowski C. et al. Automated FLT Synthesis Using 3-N-Boc-1-(5-O-4,4´-dimethoxytrityl)-3-O-nosyl-2-deoxy-β-D-lyxofuranosyl)-thymine as Precursor. Eur. J. Nucl. Med. 2001, 28, 1228. Eisenhut M. et al. A new precursor for the radiosynthesis of [^{18}F]FLT. Nucl. Med. Biol. 2002, 29, 263-273.	**1240.0010: 10 mg per vial** **1240.0020: 20 mg per vial** **1240.0025: 25 mg per vial** **1240.0030: 30 mg per vial** **1240.0040: 40 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1241	**3-N-Boc-5´-O-dimethoxytrityl-3´-O-nosyl-thymidine (GMP)** **Precursor for [^{18}F]FLT** **(3´-Deoxy-3´-[^{18}F]fluorothymidine)** Manufactured according to GMP requirements for APIs for use in clinical trials (ICH Q7 chapter 19) $C_{42}H_{43}N_3O_{13}S$ **Molar Mass:** 829.87 [444717-23-1] Yellowish solid packaged in clear glass vials. (10 ml headspace) **Purity:** $\geq$ 97 % **Certificates:** CoA with NMR and IR spectra (identity); HPLC (purity); GC (residual solvents); Content Silver (AAS); microbiology test **Chemical Name:** CA index name: 1(2H)-Pyrimidinecarboxylic acid, 3-[2-deoxy-3-O-[(4-nitrophenyl)sulfonyl]-5-O-(triphenylmethyl)-β-D-threo-pentofuranosyl]-3,6-dihydro-5-methyl-2,6-dioxo-, 1,1-dimethylethyl ester **Synonymes:** 3-N-Boc-5´-O-dimethoxytrityl-3´-O-nosyl-thymidine; 3-N-Boc-1-[5-O-(4,4´-dimethoxytrityl)-3-O-nitrophenylsulfonyl-2-deoxy-β-D-lyxofuranosyl]thymidine; 1-(2´-Deoxy-3´-O-(4-nitrobenzenesulfonyl)-5´-O-(4,4´-dimethoxytrityl)-β-D-threo-pentafuranosyl)-3-(tert-butyloxycarbonyl)thymine; Boc-FLT-Precursor; Boc-FLT **Literature:** Same as product number 1240.	**1241.0025: 25 mg per vial** **1241.0040: 40 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1250	**2,2´-Anhydrothymidine** **Precursor for 2´-[^{18}F]Fluoro-thymidine** $C_{10}H_{12}N_2O_5$ **Molar Mass:** 240.21 [22423-26-3] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 6H-Furo[2´,3´:4,5]oxazolo[3,2-a]pyrimidin-6-one, 2,3,3a,9a-tetrahydro-3-hydroxy-2-(hydroxymethyl)-7-methyl-, (2R,3R,3aS, 9aR)- **Synonymes:** 2,2´-Anhydro-(1-β-D-arabinofuranosyl)-5-methyluracil; 2,2´-Anhydro-5-methyluridine; 2,2´-Anhydro-5-methyluridine **Literature:** Abrams D.N. et al. The Synthesis of Radiolabelled 1-(2´-Fluoro-2´-deoxy-beta-D-ribofuranosyl)uracil and 1-(2´-Chloro-2´-deoxy-beta-D-ribofuranosyl)uracil. Int. J. Appl. Radiat. Isot. 1985, 36, 233-238. Codington J.F. et al. Nucleosides. XVIII. Synthesis of 2´-Fluorothymidine, 2´-Fluorodeoxyuridine, and Other 2´-Halogeno-2´-Deoxy Nucleosides. J. Org. Chem. 1964, 29, 558-564.	**1250.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

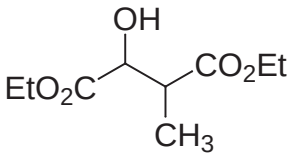
Product Number	Product	Order number / Unit
1260	**2´-Fluoro-thymidine** **Reference standard for 2´-[^{18}F]Fluoro-thymidine** $C_{10}H_{13}FN_2O_5$ **Molar Mass:** 260.22 [122799-38-6] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: Uridine, 2´-deoxy-2´-fluoro-5-methyl- **Synonymes:** 2´-Deoxy-2´-fluorothymidine; 1-(2´-Deoxy-2´-fluoro-β-D-ribofuranosyl)-5-methyluracil; 2,4(1H,3H)-Pyrimidinenone, 1(2-deoxy-2-fluoro-β-D-ribofuranosyl)-5-methyl; 2´-Deoxy-2´-fluoro-5-methyluridine; 5-Methyl-2´-fluoro-D-uridine; 5-Methyl-2´-fluorouracil; 2´-Fluoro-2´-deoxythymidine **Literature:** Abrams D.N. et al. The Synthesis of Radiolabelled 1-(2´-Fluoro-2´-deoxy-beta-D-ribofuranosyl)uracil and 1-(2´-Chloro-2´-deoxy-beta-D-ribofuranosyl)uracil. Int. J. Appl. Radiat. Isot. 1985, 36, 233-238. Codington J.F. et al. Nucleosides. XVIII. Synthesis of 2´-Fluorothymidine, 2´-Fluorodeoxyuridine, and Other 2´-Halogeno-2´-Deoxy Nucleosides. J. Org. Chem. 1964, 29, 558-564.	**1260.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

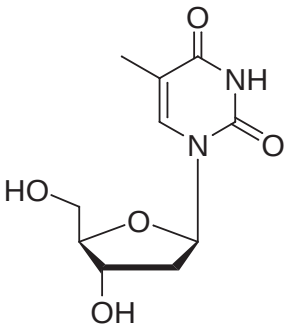
Product Number	Product	Order number / Unit
1261	**3-N-Boc-5´-O-dimethoxytrityl-3´-fluorothymidine** **Reference standard for byproduct of [^{18}F]FLT synthesis** $C_{36}H_{39}FN_2O_8$ **Molar Mass:** 646.7 [138685-99-1] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 2,4(1H,3H)-Pyrimidinedione, 1-[2-deoxy-3-O-[(2,2-dimethyl-1-oxopropoxy)methyl]-2-fluoro-5-O-[(4-methoxyphenyl)diphenylmethyl]-β-D-arabinofuranosyl]-5-methyl- **Synonymes:** 3-N-Boc-1-[5-O-(4,4´-dimethoxytrityl)-3-fluoro-2-deoxy-β-D-lyxofuranosyl]thymidine; 1-(2´-Deoxy-3´-fluoro-5´-O-(4,4´-dimethoxytrityl)-β-D-threo-pentafuranosyl)-3-(tert-butyloxycarbonyl)thymine; 1(2H)-Pyrimidinecarboxylic acid, 3-[2-deoxy-3-fluoro-5-O-(triphenylmethyl)-β-D-threo-pentofuranosyl]-3,6-dihydro-5-methyl-2,6-dioxo-, 1,1-dimethylethyl ester; protected FLT; Boc-protected FLT, Boc-protected Fluorothymidine	**1261.0005: 5 mg per vial** **1261.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

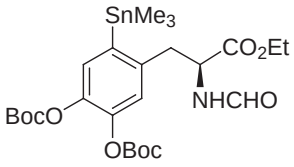
Literature:

Mosdzianowski C. et al. Automated FLT Synthesis Using 3-N-Boc-1-(5-O-4,4´-dimethoxytrityl)-3-O-nosyl-2-deoxy-β-D-lyxofuranosyl)-thymine as Precursor. Eur. J. Nucl. Med. 2001, 28, 1228.

Eisenhut M. et al. A new precursor for the radiosynthesis of [^{18}F]FLT. Nucl. Med. Biol. 2002, 29, 263-273.

Product Number	Product	Order number / Unit
1280	**DEMM** **Precursor for 2-[^{11}C]Thymidine** $C_9H_{16}O_5$ **Molar Mass:** 204.22 [93504-92-8] Colourless oil packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra; GC **Chemical Name:** CA index name: Butanedioic acid, 2-hydroxy-3-methyl-, diethyl ester **Synonymes:** Diethyl-3-methylmalate; Malic acid, 3-methyl-, diethyl ester **Literature:** Steel C. et al. An automated radiosynthesis of 2-[^{11}C]thymidine using anhydrous [^{11}C]urea derived from [^{11}C]phosgene. Appl. Radiat. Isotop. 1999, 51, 377-88. Vander Brought T. et al. Production of 2-[^{11}C]thymidine for quantification of cellular proliferation with PET. Appl. Radiat. Isotop. 1991, 42, 103-4.	**1280.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

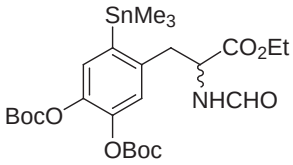
Product Number	Product	Order number / Unit
1290	**Thymidine** **Reference standard for 2-[^{11}C]Thymidine** $C_{10}H_{14}N_2O_5$ **Molar Mass:** 242.23 [50-89-5] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 99 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra; HPLC **Chemical Name:** CA index name: Thymidine **Synonymes:** β-D-Ribofuranoside, thymine-1,2-deoxy-; 5-Methyl-2´-deoxyuridine; 2´-Deoxythymidine; Uridine, 2´-deoxy-5-methyl-; Thymine 2-desoxyriboside; 1-(2-Deoxy-β-D-erythro-pentofuranosyl)-5-methyl-2,4(1H,3H)-pyrimidinedione; 2,4(1H,3H)-Pyrimidinedione, 1-(2-deoxy-β-D-erythro-pentofuranosyl)-5-methyl- **Literature:** Steel C. et al. An automated radiosynthesis of 2-[^{11}C]thymidine using anhydrous [^{11}C]urea derived from [^{11}C]phosgene. Appl. Radiat. Isotop. 1999, 51, 377-88. Vander Brought T. et al. Production of 2-[^{11}C]thymidine for quantification of cellular proliferation with PET. Appl. Radiat. Isotop. 1991, 42, 103-4.	**1290.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

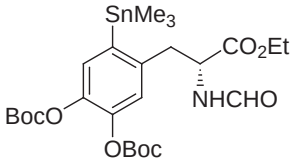
Product Number	Product	Order number / Unit
1300	**6-Trimethylstannyl-L-DOPA** **Stannylated precursor for 6-[^{18}F]Fluoro-L-DOPA** Sold under license for US patent No. 5,393,908 $C_{25}H_{39}NO_9Sn$ **Molar Mass:** 616.28 [143993-90-2] Colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{119}Sn NMR spectra; HPLC **Chemical Name:** CA index name: L-Tyrosine, 5-[[(1,1-dimethylethoxy)carbonyl]oxy]-N-formyl-2-(trimethylstannyl)-, ethyl ester, 1,1-dimethylethyl carbonate **Synonymes:** N-Formyl-3,4-di-tert-butoxycarbonyloxy-6-(trimethylstannyl)-L-phenylalanine ethyl ester; FDOPA-Precursor	**1300.0040: 40 mg per vial** **1300.0045: 45 mg per vial** **1300.0060: 60 mg per vial** **1300.0090: 90 mg per vial** **1300.0120: 120 mg per vial** **1300.0150: 150 mg per vial** **Please inquire for customized filling and bulk quantities.** 

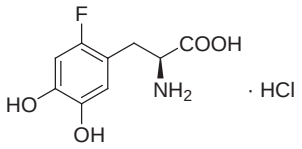
Literature:

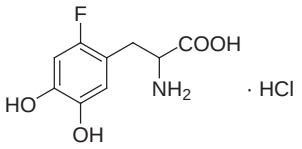
Namavari M. et al. Synthesis of 6-[^{18}F] and 4-[^{18}F]Fluoro-L-m-tyrosines via Regioselective Radiofluorodestannylation. Appl. Radiat. Isot. 1993, 44, 527-536.

Namavari M. et al. Regioselective Radiofluorodestannylation with [^{18}F]F_2 and [^{18}F]CH_3COOF: a High Yield Synthesis of 6[^{18}F]Fluoro-L-DOPA. Appl. Radiat. Isot. 1992, 43, 989-996.

Product Number	Product	Order number / Unit
1302	**6-Trimethylstannyl-D,L-DOPA** **Precursor for 6-[^{18}F]Fluoro-D,L-DOPA (Analytical standard for validation of 6-[^{18}F]Fluoro-L-DOPA synthesis)** $C_{25}H_{39}NO_9Sn$ **Molar Mass:** 616.28 CAS-RN not yet assigned Colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{119}Sn NMR spectra; HPLC **Chemical Name:** D,L-Tyrosine, 5-[[(1,1-dimethylethoxy)carbonyl]oxy]-N-formyl-2-(trimethylstannyl)-, ethyl ester, 1,1-dimethylethyl carbonate **Synonymes:** N-Formyl-3,4-di-tert-butoxycarbonyloxy-6-(trimethylstannyl)-D,L-phenylalanine ethyl ester **Literature:** Namavari M. et al. Synthesis of 6-[^{18}F] and 4-[^{18}F]Fluoro-L-m-tyrosines via Regioselective Radiofluorodestannylation. Appl. Radiat. Isot. 1993, 44, 527-536. Namavari M. et al. Regioselective Radiofluorodestannylation with [^{18}F]F_2 and [^{18}F]CH_3COOF: a High Yield Synthesis of 6[^{18}F]Fluoro-L-DOPA. Appl. Radiat. Isot. 1992, 43, 989-996.	**1302.0010: 10 mg per vial** **1302.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1303	**6-Trimethylstannyl-D-DOPA** **Precursor for 6-[^{18}F]Fluoro-D-DOPA (Analytical standard for validation of 6-[^{18}F]Fluoro-L-DOPA synthesis)** $C_{25}H_{39}NO_9Sn$ **Molar Mass:** 616.28 CAS-RN not yet assigned Colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{119}Sn NMR spectra; HPLC **Chemical Name:** D-Tyrosine, 5-[[(1,1-dimethylethoxy)carbonyl]oxy]-N-formyl-2-(trimethylstannyl)-, ethyl ester, 1,1-dimethylethyl carbonate **Synonymes:** N-Formyl-3,4-di-tert-butoxycarbonyloxy-6-(trimethylstannyl)-D-phenylalanine ethyl ester **Literature:** Namavari M. et al. Synthesis of 6-[^{18}F] and 4-[^{18}F]Fluoro-L-m-tyrosines via Regioselective Radiofluorodestannylation. Appl. Radiat. Isot. 1993, 44, 527-536. Namavari M. et al. Regioselective Radiofluorodestannylation with [^{18}F]F_2 and [^{18}F]CH_3COOF: a High Yield Synthesis of 6[^{18}F]Fluoro-L-DOPA. Appl. Radiat. Isot. 1992, 43, 989-996.	**1303.0010: 10 mg per vial** **1303.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1310	**6-Fluoro-L-DOPA hydrochloride** **Reference standard for 6-[^{18}F]Fluoro-L-DOPA** $C_9H_{10}FNO_4 \cdot HCl$ **Molar Mass:** 251.64 [144334-59-8] Nearly colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra; HPLC **Chemical Name:** CA index name: L-Tyrosine, 2-fluoro-5-hydroxy-, hydrochloride **Synonymes:** 2-Fluoro-5-hydroxyl-L-tyrosine hydrochloride; 6-Fluoro-L-DOPA hydrochloride; 6-Fluoro-DOPA-hydrochloride; F-L-DOPA · HCl; FDOPA **Literature:** Namavari M. et al. Regioselective Radiofluorodestannylation with [^{18}F]CH_3COOF: a High Yield Synthesis of 6-[^{18}F]Fluoro-L-dopa. Appl. Radiot. Isot., Int. J. Radiat. Appl. Instrum. Part A 1992, 43, 989-996. Iwata R. et al. Regioselective Synthesis of 6-[^{18}F]-Fluoro-L-dopa via Radiofluorodestannylation. CYRIC Annual Report, 1997, 99-102. Dolle F. et al. 6-[^{18}F]Fluoro L DOPA by Radiofluorodestannylation: A Short and Simple Synthesis of a New Labelling Precursor. J. Labelled Compd. Radiopharm. 1998, 41, 105-114.	**1310.0005: 5 mg per vial** **1310.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

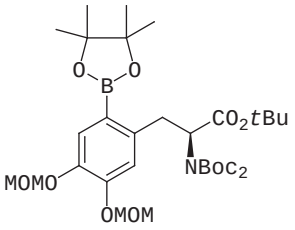
Product Number	Product	Order number / Unit
1311	**6-Fluoro-D,L-DOPA hydrochloride** **Reference standard for 6-[^{18}F]Fluoro-D,L-DOPA** $C_9H_{10}FNO_4 \cdot HCl$ **Molar Mass:** 251.64 [102034-49-1] (free base) Colourless to yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra; HPLC **Chemical Name:** Tyrosine, 2-fluoro-5-hydroxy, hydrochloride **Synonymes:** 2-Amino-3-(2-fluoro-4,5-dihydroxyphenyl)propanoic acid hydrochloride; 6-Fluoro-D,L-DOPA hydrochloride; F-D,L-DOPA · HCl **Literature:** Namavari M. et al. Regioselective Radiofluorodestannylation with [^{18}F]CH_3COOF: a High Yield Synthesis of 6-[^{18}F]Fluoro-L-dopa. Appl. Radiot. Isot., Int. J. Radiat. Appl. Instrum. Part A 1992, 43, 989-996. Iwata R. et al. Regioselective Synthesis of 6-[^{18}F]-Fluoro-L-dopa via Radiofluorodestannylation. CYRIC Annual Report, 1997, 99-102. Dolle F. et al. 6-[^{18}F]Fluoro L DOPA by Radiofluorodestannylation: A Short and Simple Synthesis of a New Labelling Precursor. J. Labelled Compd. Radiopharm. 1998, 41, 105-114.	**1311.0005: 5 mg per vial** **1311.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1312	**F-L-DOPA pinacol boronate precursor** **Nucleophilic Precursor for 6-[^{18}F]Fluoro-L-DOPA**	**1312.0017: 17 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_{33}H_{54}BNO_{12}$ **Molar Mass:** 667.59

CAS-RN not yet assigned

Colourless to yellow viscous oil packaged in dark glass crimp cap vials.



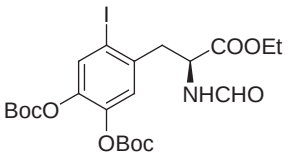
Purity: > 95 %

Certificates:
CoA; ^{1}H NMR spectrum

Chemical Name:
tert-butyl-(S)2-((di-tert-butoxycarbonyl)amino)-3-(2-4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl-4,5-dimethoxymethylphenyl)propanoate

Synonymes:

Literature:
Gouverneur V. et al. A General Copper-Mediated Nucleophilic ^{18}F-Fluorination of Arenes. Angew. Chem. 2014, 126, 7885-7889.

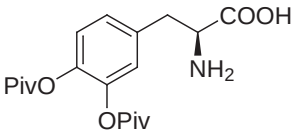
Product Number	Product	Order number / Unit
1320	**DiBoc-Iodo-L-DOPA** **Precursor for 6-[^{123}I]Iodo-L-DOPA** $C_{22}H_{30}INO_9$ **Molar Mass:** 579.38 [143993-89-9] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: L-Tyrosine, 5-[[(1,1-dimethylethoxy)carbonyl]oxy]-N-formyl-2-iodo-, ethyl ester, 1,1-dimethylethyl carbonate **Synonymes:** N-Formyl-3,4-di-tert-butoxycarbonyloxy-6-iodo-L-phenylalanine ethyl ester	**1320.0050: 50 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Kawai K. et al. Synthesis and Evaluation of Radioiodinated 6-Iodo-L-Dopa as a Cerebral L-Amino Acid Transport Marker. Nucl. Med. Biol. 1996, 23, 251-255.

Adam M.J. et al. Synthesis and preliminary Evaluation of L-6-[^{123}I]Iodo-Dopa as a Potential spect brain imaging agent.J. Labelled Compd. Radiopharm. 1990, 28, 155-166.

Namavari M. et al. Regioselective Radiofluorodestannylation with [^{18}F]F_2 and [^{18}F]CH_3COOF: a High Yield Synthesis of 6[^{18}F]Fluoro-L-DOPA. Appl. Radiat. Isot. 1992, 43, 989-996.

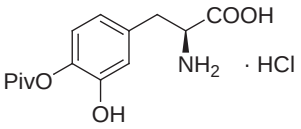
Product Number	Product	Order number / Unit
1328	**3,4-Di-O-Pivaloyl-L-DOPA** **Precursor for 6-[^{18}F]Fluoro-L-DOPA** $C_{19}H_{27}NO_6$ **Molar Mass:** 365.42 [42567-91-9] Colourless to nearly colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** L-Tyrosine, 3,4-bis-(2,2-dimethylpropanoate) **Synonymes:** 3,4-di-O-pivaloyl-L-phenylalanine; L-3-(3,4-di-pivaloyloxyphenyl) alanine; 2-Amino-3-[3,4-bis-(2,2-dimethyl-propionyloxy)-phenyl]-propionic acid di-O-pivaloyl-L-dopa; dPdopa;	**1328.0015: 15 mg per vial** **1328.0030: 30 mg per vial** **Please inquire for customized filling and bulk quantities.** 

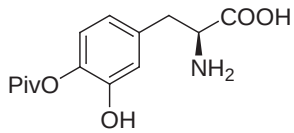
Literature:

Bodor N. et al. Improved Delivery through Biological Membranes. 4. Prodrugs of L-Dopa. J. Med. Chem. 1977, 20, 1435-1445.

Ihara M. et al. New Potential Prodrug to Improve the Duration of L-Dopa: L-3-(3-Hydroxy-4-pivaloyloxyphenyl)alanine. J. Pharm. Sci. 1989, 78, 525-529.

Ishiwata K. et al. Electrophilic Synthesis of 6-[18F]Fluoro-L-DOPA: Use of 4-O-Pivaloyl-L-DOPA as a Suitable Precursor for Routine Production. Appl. Radiat. Isot. 1993, 44, 755-759.

Product Number	Product	Order number / Unit
1329	**4-O-Pivaloyl-L-DOPA Hydrochloride** **Precursor for 6-[^{18}F]Fluoro-L-DOPA** $C_{14}H_{20}ClNO_5$ **Molar Mass:** 317.77 [122769-71-5] Colourless to nearly colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** L-Tyrosine, 3-hydroxy-4-(2,2-dimethylpropanoate) **Synonymes:** 3-hydroxy-4-O-pivaloyl-L-phenylalanine hydrochloride; L-3-(3-hydroxy-4-pivaloyloxyphenyl) alanine hydrochloride; 2-Amino-3-[3,4-bis-(2,2-dimethyl-propionyloxy)-phenyl]-propionic acid hydrochloride; pivaloyl-L-dopa hydrochloride; mPdopa HCl **Literature:** Bodor N. et al. Improved Delivery through Biological Membranes. 4. Prodrugs of L-Dopa. J. Med. Chem. 1977, 20, 1435-1445. Ihara M. et al. New Potential Prodrug to Improve the Duration of L-Dopa: L-3-(3-Hydroxy-4-pivaloyloxyphenyl)alanine. J. Pharm. Sci. 1989, 78, 525-529. Ishiwata K. et al. Electrophilic Synthesis of 6-[18F]Fluoro-L-DOPA: Use of 4-O-Pivaloyl-L-DOPA as a Suitable Precursor for Routine Production. Appl. Radiat. Isot. 1993, 44, 755-759.	**1329.0015: 15 mg per vial** **1329.0030: 30 mg per vial** **Please inquire for customized filling and bulk quantities.** 

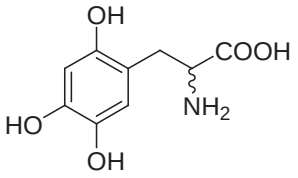
Product Number	Product	Order number / Unit
1330	**4-O-Pivaloyl-L-DOPA** **Precursor for 6-[^{18}F]Fluoro-L-DOPA** $C_{14}H_{19}NO_5$ **Molar Mass:** 281.3 [122551-95-5] Colourless to nearly colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: L-Tyrosine, 3-hydroxy-, 4-(2,2-dimethylpropanoate) **Synonymes:** 4-O-Pivaloyl-3-hydroxy-L-phenylalanine; L-3-(3-Hydroxy-4-pivaloyloxyphenyl)alanine; PDOPA; PivDOPA **Literature:** Bodor N. et al. Improved Delivery through Biological Membranes. 4. Prodrugs of L-Dopa. J. Med. Chem. 1977, 20, 1435-1445. Ihara M. et al. New Potential Prodrug to Improve the Duration of L-Dopa: L-3-(3-Hydroxy-4-pivaloyloxyphenyl)alanine. J. Pharm. Sci. 1989, 78, 525-529. Ishiwata K. et al. Electrophilic Synthesis of 6-[^{18}F]Fluoro-L-DOPA: Use of 4-O-Pivaloyl-L-DOPA as a Suitable Precursor for Routine Production. Appl. Radiat. Isot. 1993, 44, 755-759.	**1330.0015: 15 mg per vial** **1330.0030: 30 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1332	**6-Hydroxy-D,L-DOPA** **Reference standard for byproduct of 6-[^{18}F]Fluoro-L-DOPA synthesis**	**1332.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_9H_{11}NO_5$ **Molar Mass:** 213.19

[21373-30-8]

Off-white to slightly coloured solid packaged in dark glass crimp cap vials.



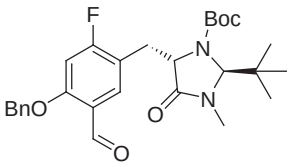
Purity: > 95 %

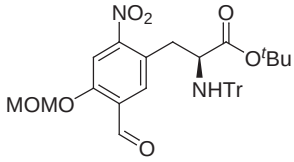
Certificates:
CoA; ^{1}H NMR spectrum

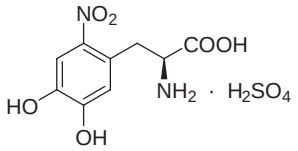
Chemical Name:
CA index name: Tyrosine, 2,5-dihydroxy-

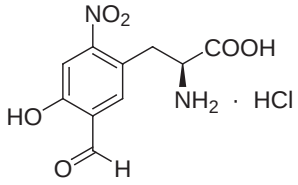
Synonymes:
2,4,5-Trihydroxy-D,L-phenylalanine, 2,4,5-Trihydroxyphenylalanine, 3,4,6-Trihydroxy-D,L-phenylalanine, 2,5-Dihydroxy-D,L-tyrosine; D,L-TOPA

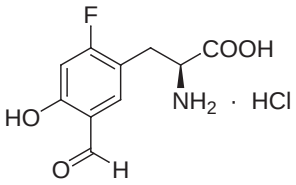
Literature:
Pike V.W. et al. Labelled agents for PET studies of the dopaminergic system–some quality assurance methods, experience and issues. Int. J. Rad. Appl. Instrum. [A]. 1990, 41, 483-492.

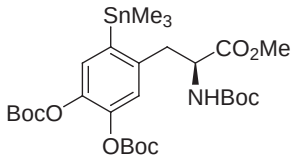
Product Number	Product	Order number / Unit
1335	**Nucleophilic F-L-DOPA precursor** **Nucleophilic precursor for 6-[^{18}F]Fluoro-L-DOPA** $C_{28}H_{35}FN_2O_5$ **Molar Mass:** 498.59 [1159940-23-4] Colourless solid packaged in glass vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 1-Imidazolidinecarboxylic acid, 2-(1,1-dimethylethyl)-5-[[2-fluoro-5-formyl-4-(phenylmethoxy)phenyl]methyl]-3-methyl-4-oxo-, 1,1-dimethylethyl ester **Synonymes:** (2S,5S)-tert-butyl-5-(4-benzyloxy-2-fluoro-5-formylbenzyl)-2-tert-butyl-3-methyl-4-oxoimidazolidine-1-carboxylate; nuc F-L-DOPA-Precursor **Literature:** Coenen H.H. et al. Three-Step, One-Pot Radiosynthesis of 6-Fluoro-3,4-Dihydroxy-L-Phenylalanine by Isotopic Exchange. J. Nucl. Med. 2009, 50, 1724-1729.	**1335.0010: 10 mg per vial** **1335.0020: 20 mg per vial** **Please inquire for customized filling and bulk quantities.** 

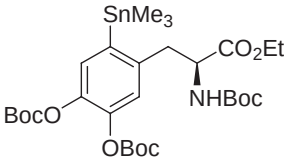
Product Number	Product	Order number / Unit
1336	**n.c.a. Nucleophilic F-L-DOPA precursor** **n.c.a. Nucleophilic Precursor for 6-[^{18}F]Fluoro-L-DOPA** $C_{35}H_{36}N_2O_7$ **Molar Mass:** 596.67 CAS-RN not yet assigned Yellowish solid packaged in dark glass vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** (S)-3-(5-Formyl-4-methoxymethoxy-2-nitro-phenyl)-2-(trityl-amino)-propionic acid tert-butyl ester **Synonymes:** ABX128 **Literature:** no literature reference available	**1336.0030: 30 mg per vial** **Please inquire for customized filling and bulk quantities.** 

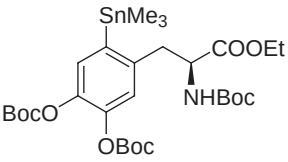
Product Number	Product	Order number / Unit
1337	**6-Nitro-L-DOPA hydrogensulfate** **Reference standard for byproduct of nucleophilic 6-[^{18}F]fluoro-L-DOPA synthesis** $C_9H_{12}N_2O_{10}S$ **Molar Mass:** 340.27 [1261156-59-5] (free base) Greenish solid packaged in dark glass vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** L-Tyrosine, 5-hydroxy, 2-nitro, hydrogensulfate **Synonymes:** n/a **Literature:** no literature reference available	**Please inquire for customized filling and bulk quantities.** 

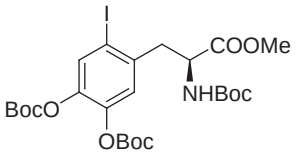
Product Number	Product	Order number / Unit
1338	**6-Nitro-Formyl-DOPA HCl** **Reference standard for byproduct of nucleophilic 6-[^{18}F]fluoro-L-DOPA synthesis** $C_{10}H_{11}ClN_2O_6$ **Molar Mass:** 290.66 CAS-RN not yet assigned Yellowish solid packaged in dark glass vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** L-Tyrosine, 5-formyl, 2-nitro, hydrochloride **Synonymes:** n/a **Literature:** no literature reference available	**Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1339	**6-Fluoro-Formyl-DOPA HCl** **Reference standard for byproduct of nucleophilic 6-[^{18}F]fluoro-L-DOPA synthesis** **L-3,4-Dihydroxyphenylalanin no carrier added** $C_{10}H_{11}ClFNO_4$ **Molar Mass:** 263.65 CAS-RN not yet assigned packaged in dark glass vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** L-Tyrosine, 5-formyl, 2-fluoro, hydrochloride **Synonymes:** n/a **Literature:** no literature reference available	**Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1340	**TriBoc-L-DOPA methyl ester** **Stannylated precursor for 6-[^{18}F]Fluoro-L-DOPA** $C_{28}H_{45}NO_{10}Sn$ **Molar Mass:** 647.37 [857502-21-7] Colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{119}Sn NMR spectra **Chemical Name:** CA index name: L-Tyrosine, N-[(1,1-dimethylethoxy)carbonyl]-5-[[(1,1-dimethylethoxy)carbonyl]oxy]-2-(trimethylstannyl)-, methyl ester, 1,1-dimethylethyl carbonate (ester) **Synonymes:** N-tert-butoxycarbonyl-3,4-di-tert-butoxycarbonyloxy-6-(trimethylstannyl)-L-phenylalanine methyl ester **Literature:** Okazaki M. et al. Regioselective Synthesis of 6-[^{18}F]Fluoro-L-dopa via Radiofluorodestannylation. CYRIC Annual Report 1997, 99-102.	**1340.0060: 60 mg per vial** **1340.0090: 90 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1341	**TriBoc-D,L-DOPA ethyl ester** **Analytical standard for validation of 6-[^{18}F]Fluoro-L-DOPA synthesis** $C_{29}H_{47}NO_{10}Sn$ **Molar Mass:** 688.39 CAS-RN not yet assigned Colourless or nearly colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{119}Sn NMR spectra **Chemical Name:** D,L-Tyrosine, 5[[(1,1-dimethylethoxy)carbonyl]oxy]-N-[(1,1-dimethylethoxy)carbonyl]-2-(trimethylstannyl)-, ethyl ester, 1,1-dimethylethyl carbonate **Synonymes:** N-(tert-butoxycarbonyl)-3,4-di(tertbutoxycarbonyloxy)-6-(trimethylstannyl)-D,Lphenylalanine ethyl ester **Literature:** Dolle F. et al. 6-[^{18}F]Fluoro-L-DOPA by Radiofluorodestannylation: A Short and Simple Synthesis of a New Labelling Precursor. J. Labelled Compd. Radiopharm. 1998, 41, 105-114.	**1341.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1342	**TriBoc-L-DOPA ethyl ester** **[^{18}F]Fluoro-L-DOPA synthesis** $C_{29}H_{47}NO_{10}Sn$ **Molar Mass:** 688.39 [203398-46-3] Colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{119}Sn NMR spectra **Chemical Name:** CA index name: L-Tyrosine, 5[[(1,1-dimethylethoxy)carbonyl]oxy]-N-[(1,1-dimethylethoxy)carbonyl]-2-(trimethylstannyl)-, ethyl ester, 1,1-dimethylethyl carbonate **Synonymes:** N-(tert-butoxycarbonyl)-3,4-di(tert-butoxycarbonyloxy)-6-(trimethylstannyl)-L-phenylalanine ethyl ester **Literature:** Dolle F. et al. 6-[^{18}F]Fluoro-L-DOPA by Radiofluorodestannylation: A Short and Simple Synthesis of a New Labelling Precursor. J. Labelled Compd. Radiopharm. 1998, 41, 105-114.	**1342.0060: 60 mg per vial** **1342.0090: 90 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1350	**TriBoc-Iodo-L-DOPA** **Precursor for 6-[$^{123/125}$I]Iodo-DOPA** $C_{25}H_{36}INO_{10}$ **Molar Mass:** 637.46 [853759-55-4] Colourless to yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: L-Tyrosine, 5-[[(1,1-dimethylethoxy)carbonyl]oxy]-N-[(1,1-dimethylethoxy)carbonyl]-2-iodo-, methyl ester, 1,1-dimethylethyl carbonate **Synonymes:** N-tert-butoxycarbonyl-3,4-di-tert-butoxycarbonyloxy-6-iodo-L-phenylalanine methyl ester	**1350.0050: 50 mg per vial** **Please inquire for customized filling and bulk quantities.** 

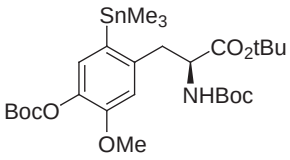
Literature:

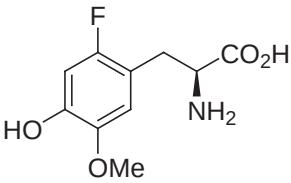
Okazaki M. et al. Regioselective Synthesis of 6-[^{18}F]Fluoro-L-dopa via Radiofluorodestannylation. CYRIC Annual Report 1997, 99-102.

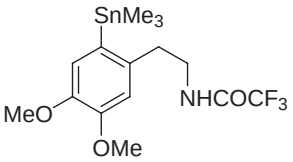
Kawai K. et al. Synthesis and Evaluation of Radioiodinated 6-Iodo-L-Dopa as a Cerebral L-Amino Acid Transport Marker. Nucl. Med. Biol. 1996, 23, 251-255.

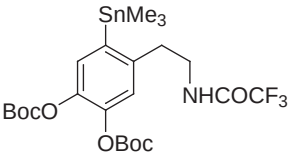
Namavari M. et al. Regioselective Radiofluorodestannylation with [^{18}F]F_2 and [^{18}F]CH_3COOF: a High Yield Synthesis of 6[^{18}F]Fluoro-L-DOPA. Appl. Radiat. Isot. 1992, 43, 989-996.

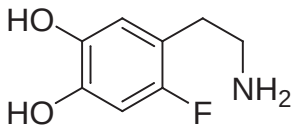
Adam M.J. et al. Synthesis and preliminary Evaluation of L-6-[^{123}I]Iododopa as a Potential spect brain imaging agent. J. Labelled Compd. Radiopharm. 1990, 28, 155-166.

Product Number	Product	Order number / Unit
1363	**OMFD precursor ABX004** **Precursor for [^{18}F]OMFD (3-O-Methyl-6-[^{18}F]fluoro-L-DOPA)** Metabolite of 6-Fluoro-L-DOPA $C_{27}H_{45}NO_8Sn$ **Molar Mass:** 630.36 CAS-RN not yet assigned Colourless crystals packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{119}Sn NMR spectra; HPLC **Chemical Name:** L-Tyrosine, N-[(1,1-dimethylethoxy)carbonyl]-3-methoxy-2-(trimethylstannyl)-, 1,1-dimethylethyl ester, 1,1-dimethylethyl carbonate (ester) **Synonymes:** ABX004; N,O-Diboc-3-O-methyl-6-trimethylstannyl-DOPA tert-butyl-ester; DiBoc-OMFD-Precursor **Literature:** Bergmann et al. 3-O-methyl-6-^{18}F-fluoro-L-dopa, a new tumor imaging agent: investigation of transport mechanism in vitro. J. Nucl. Med. 2004, 45, 2116-2222.	**1363.0045: 45 mg per vial** **1363.0060: 60 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1369	**OMFD** **Reference standard for [^{18}F]OMFD (3-O-Methyl-6-[^{18}F]fluoro-L-DOPA)** Metabolite of 6-Fluoro-L-DOPA $C_{10}H_{12}FNO_4$ **Molar Mass:** 229.21 [114077-01-9] Colourless to yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: L-Tyrosine, 2-fluoro-5-methoxy- **Synonymes:** O-Methyl-6-fluorodopa; 3-O-Methyl-6-fluoro-L-DOPA **Literature:** Bergmann et al. 3-O-methyl-6-^{18}F-fluoro-L-dopa, a new tumor imaging agent: investigation of transport mechanism in vitro. J. Nucl. Med. 2004, 45, 2116-2222. Füchtner F. et al. Efficient synthesis of the ^{18}F-labelled 3-O-methyl-6-[^{18}F]fluoro-L-DOPA. Appl. Radiat. Isot. 2003, 58, 575-578. Adam M.J. et al. Stereoselective synthesis of 3-O-methyl-6-[^{18}F]fluorodopa via fluorodestannylation. J. Labelled Compd. Radiopharm. 1994, 34, 565-570.	**1369.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

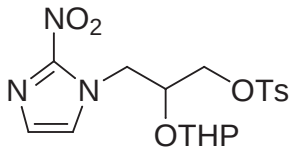
Product Number	Product	Order number / Unit
1370	**N-Trifluoroacetyl-3,4-dimethoxy-6-trimethylstannyl-phenethylamine** **Precursor for 6-[^{18}F]Fluorodopamine** $C_{15}H_{22}F_3NO_3Sn$ **Molar Mass:** 440.05 [170465-14-2] Colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H, ^{19}F and ^{119}Sn NMR spectra **Chemical Name:** CA index name: Acetamide, N-[2-[4,5-dimethoxy-2-(trimethylstannyl)phenyl]ethyl]-2,2,2-trifluoro- **Synonymes:** N-trifluoroacetyl-(3,4-dimethoxy-6-trimethylstannylphenyl)ethylamine **Literature:** Culbert P.A. et al. Facile Synthesis of N-Trifluoroacetyl-3,4-dimethoxy-6-trimethylstannylphenethylamine: A Convenient Precursor to 6-[^{18}F]Fluorodopamine. Appl. Radiat. Isot. 1995, 46, 883-885.	**1370.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

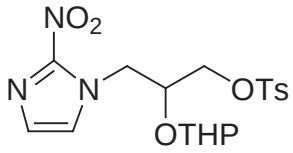
Product Number	Product	Order number / Unit
1371	**N-Trifluoroacetyl-3,4-di-tert-butoxycarbonyloxy-6-trimethylstannyl-phenethylamine** **Precursor for 6-[^{18}F]Fluorodopamine** $C_{23}H_{34}F_3NO_7Sn$ **Molar Mass:** 612.22 [170953-68-1] Colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H, ^{19}F and ^{119}Sn NMR spectra **Chemical Name:** CA index name: Carbonic acid, 4-[2-[(trifluoroacetyl)amino]ethyl]-5-(trimethylstannyl)-1,2-phenylene bis(1,1-dimethylethyl) ester **Synonymes:** N-trifluoroacetyl-(3,4-O-di-Boc-6-trimethylstannylphenyl)ethylamine **Literature:** Namavari M. et al. Synthesis of 6-[^{18}F] and 4-[^{18}F]Fluoro-L-m-tyrosines via Regioselective Radiofluorodestannylation. Appl. Radiat. Isot. 1993, 44, 527-536. Namavari M. et al. Regioselective Radiofluorodestannylation with [^{18}F]F_2 and [^{18}F]CH_3COOF: a High Yield Synthesis of 6[^{18}F]Fluoro-L-DOPA. Appl. Radiat. Isot. 1992, 43, 989-996.	**1371.0010: 10 mg per vial** **1371.0060: 60 mg per vial** **Please inquire for customized filling and bulk quantities.** 

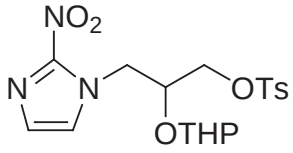
Product Number	Product	Order number / Unit
1380	**6-Fluorodopamine** **Reference standard for 6-[^{18}F]Fluorodopamine** $C_8H_{10}FNO_2$ **Molar Mass:** 171.17 [71144-39-3] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 1,2-Benzenediol, 4-(2-aminoethyl)-5-fluoro- **Synonymes:** 6-Fluorodopamine; 4-(2-Aminoethyl)-5-fluorobenzene-1,2-diol; 4-Fluoro-5-(2-aminoethyl)benzene-1,2-diol	**1380.0005: 5 mg per vial** **1380.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

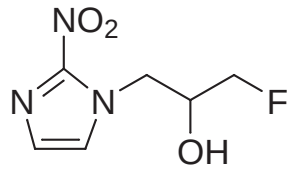
Literature:

Ding Y.-S. et al. Synthesis of High Specific Activity 6-[^{18}F]Fluorodopamine for Positron Emission Tomography Studies of Sympathetic Nervous Tissue. J. Med. Chem. 1991, 34. 861-863.

Product Number	Product	Order number / Unit
1400	**NITTP** **Precursor for [^{18}F]FMISO ([^{18}F]Fluoromisonidazole)** Remark: Product consists of diastereomers of varying proportions without affecting product quality $C_{18}H_{23}N_3O_7S$ **Molar Mass:** 425.46 [150196-34-2] Yellowish solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: 1H-imidazole-1-propanol, 2-nitro-β-[(tetrahydro-2H-pyran-2-yl)oxy]-, 4-methylbenzenesulfonate (ester) **Synonymes:** 1-(2´-Nitro-1´-imidazolyl)-2-O-tetrahydropyranyl-3-O-toluenesulfonyl-propanediol; 3-(2-Nitroimidazol-1-yl)-2-O-tetrahydropyranyl-1-O-toluenesulfonylpropanediol **Literature:** Oh S.J. et al. Fully automated synthesis of [^{18}F]fluoromisonidazole using a conventional [^{18}F]FDG module. Nucl. Med. Biol. 2005, 32, 899-905. Lim J. et al. An efficient radiosynthesis of [^{18}F]Fluoromisonidazole. Appl. Radiat. Isot. 1993, 44, 1085-1091. Martin G.V. et al. Noninvasive detection of hypoxic myocardium using (^{18}F(Fluoromisonidazole and positron emission tomography. J. Nucl. Med. 1992, 33, 2202-2208. Rasey J.S. et al. Radiolabeled fluoromisoindazole as an imaging agent for tumor hypoxia. Int. J. Radiat. Oncol. Biol. Phys. 1989, 17, 985-991.	**1400.0005: 5 mg per vial** **1400.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1401	**NITTP (GMP)** **Precursor for [^{18}F]FMISO ([^{18}F]Fluoromisonidazole)** Manufactured according to GMP requirements for APIs for use in clinical trials (ICH Q7 chapter 19) $C_{18}H_{23}N_3O_7S$ **Molar Mass:** 425.46 [150196-34-2] Yellowish solid packaged in dark glass crimp cap vials. **Purity:** $\geq$ 97 % **Certificates:** CoA with NMR and IR spectra (identity); HPLC (purity); GC (residual solvents); microbiology test **Chemical Name:** CA index name: 1H-imidazole-1-propanol, 2-nitro-β-[(tetrahydro-2H-pyran-2-yl)oxy]-, 4-methylbenzenesulfonate (ester) **Synonymes:** 1-(2´-Nitro-1´-imidazolyl)-2-O-tetrahydropyranyl-3-O-toluenesulfonyl-propanediol; 3-(2-Nitroimidazol-1-yl)-2-O-tetrahydropyranyl-1-O-toluenesulfonylpropanediol **Literature:** Same as product number 1400.	**1401.0005: 5 mg per vial** **1401.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1402	**NITTP (GMP)** **Precursor for [^{18}F]FMISO ([^{18}F]Fluoromisonidazole)** Manufactured according to GMP requirements for APIs for use in clinical trials (ICH Q7 chapter 19) $C_{18}H_{23}N_3O_7S$ **Molar Mass:** 425.46 [150196-34-2] Yellowish solid packaged in clear glass vials (10 ml headspace) **Purity:** $\geq$ 97 % **Certificates:** CoA with NMR and IR spectra (identity); HPLC (purity); GC (residual solvents); microbiology test **Chemical Name:** CA index name: 1H-imidazole-1-propanol, 2-nitro-β-[(tetrahydro-2H-pyran-2-yl)oxy]-, 4-methylbenzenesulfonate (ester) **Synonymes:** 1-(2´-Nitro-1´-imidazolyl)-2-O-tetrahydropyranyl-3-O-toluenesulfonyl-propanediol; 3-(2-Nitroimidazol-1-yl)-2-O-tetrahydropyranyl-1-O-toluenesulfonylpropanediol **Literature:** Same as product number 1400.	**1402.0005: 5 mg per vial** **1402.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1410	**Fluoromisonidazole** **Reference standard for [^{18}F]FMISO ([^{18}F]Fluoromisonidazole)** $C_6H_8N_3O_3F$ **Molar Mass:** 189.14 [13551-89-8] Yellow crystals packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 1H-Imidazole-1-ethanol, α-(fluoromethyl)-2-nitro- **Synonymes:** 1-Fluoro-3-(2-nitro-imidazol-1-yl)-propan-2-ol; FMISO	**1410.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

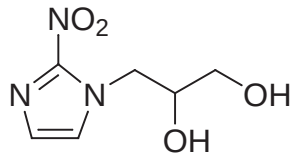
Literature:

Oh S.J. et al. Fully automated synthesis of [^{18}F]fluoromisonidazole using a conventional [^{18}F]FDG module. Nucl. Med. Biol. 2005, 32, 899-905.

Lim J. et al. An efficient radiosynthesis of [^{18}F]Fluoromisonidazole. Appl. Radiat. Isot. 1993, 44, 1085-1091.

Martin G.V. et al. Noninvasive detection of hypoxic myocardium using (^{18}F(Fluoromisonidazole and positron emission tomography. J. Nucl. Med. 1992, 33, 2202-2208.

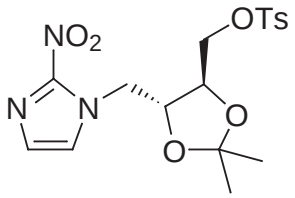
Rasey J.S. et al. Radiolabeled fluoromisoindazole as an imaging agent for tumor hypoxia. Int. J. Radiat. Oncol. Biol. Phys. 1989, 17, 985-991.

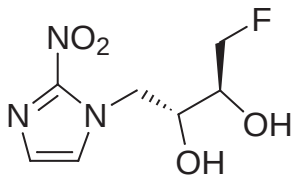
Product Number	Product	Order number / Unit
1420	**Desmethylmisonidazole** **Reference standard for byproduct of [^{18}F]FMISO synthesis ([^{18}F]Fluoromisonidazole)** $C_6H_9N_3O_4$ **Molar Mass:** 187.15 [13551-92-3] Yellow solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 1,2-Propanediol, 3-(2-nitro-1H-imidazol-1-yl)- **Synonymes:** 1,2-Propanediol, 3-(2-nitroimidazol-1-yl)-; 1-(2,3-Dihydroxypropyl)-2-nitro-1H-imidazole; 3-(2-Nitroimidazol-1-yl)-1,2-propanediol; DHPNI; Ro 5-9963; SR 1530	**1420.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

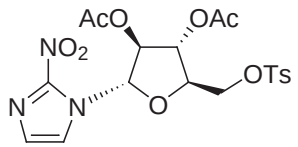
Literature:

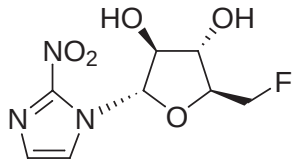
Fong M.T. et al. Synthesis of 1-(2,3-dihydroxyproyl)-2-nitro-1H-imidazole-2-14C and N-(2-hydroxyethyl)-2-(2-nitro-1H-imidazolyl-2-14C) acetamide. J. Labelled Compd. Radiopharm. 1986, 23, 981-985.

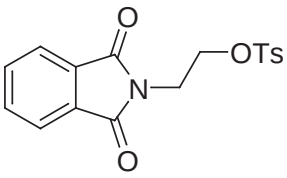
Beaman A.G. et al. Studies in the nitroimidazole series III. 2-nitroimidazole derivatives substituted in the 1-position. Antimicrob. Agents Chemother. 1968, 520-530.

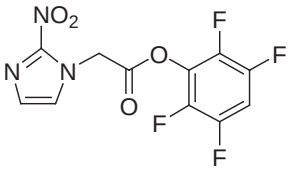
Product Number	Product	Order number / Unit
1430	**FETNIM precursor** **Precursor for [^{18}F]FETNIM** $C_{17}H_{21}N_3O_7S$ **Molar Mass:** 411.43 [163714-99-6] Colourless to yellowish oil packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 1,3-Dioxolane-4-methanol, 2,2-dimethyl-5-[(2-nitro-1H-imidazol-1-yl)methyl]-, 4-methylbenzenesulfonate (ester), (4R-trans)- **Synonymes:** FETNIM precursor **Literature:** Yang D.J. et al. Development of F-18-labeled Fluoroerythro-nitroimidazole as a PET agent for imaging Tumor Hypoxia. Radiology 1995, 194, 795-800. Grönroos T. et al. Pharmacokinetics of [^{18}F]FETNIM, A Potential Hypoxia Marker for PET. J. Nucl. Med. 2001, 42, 1397-1404. Lethiö K. et al. Imaging perfusion and hypoxia with PET to predict radiotherapy response in head-and-neck cancer. Int. J. Radiat. Oncol. Biol. Phys. 2004, 59, 971-982.	**1430.0010: 10 mg per vial** **1430.0020: 20 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1440	**FETNIM** **Reference standard for [^{18}F]FETNIM** $C_7H_{10}FN_3O_4$ **Molar Mass:** 219.17 [204977-05-9]([^{18}F]FETNIM) Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** 2,3-Butanediol, 1-fluoro-4-(2-nitro-1H-imidazol-1-yl)-, [R-(R*,S*)]- **Synonymes:** Fluoroerythronitroimidazole **Literature:** Yang D.J. et al. Development of F-18-labeled Fluoroerythro-nitroimidazole as a PET agent for imaging Tumor Hypoxia. Radiology 1995, 194, 795-800. Grönroos T. et al. Pharmacokinetics of [^{18}F]FETNIM, A Potential Hypoxia Marker for PET. J. Nucl. Med. 2001, 42, 1397-1404. Lethiö K. et al. Imaging perfusion and hypoxia with PET to predict radiotherapy response in head-and-neck cancer. Int. J. Radiat. Oncol. Biol. Phys. 2004, 59, 971-982.	**1440.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

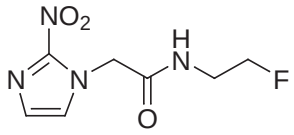
Product Number	Product	Order number / Unit
1450	**1-(2,3-Diacetyl-5-tosyl-(α-D-arabinofuranosyl)-2-nitroimidazole** **Precursor for [^{18}F]FAZA ([^{18}F]Fluoroazomycin Arabinoside)** $C_{19}H_{21}N_3O_{10}S$ **Molar Mass:** 483.45 [494775-35-8] Colourless to yellowish solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 1H-Imidazole, 1-[2,3-di-O-acetyl-5-O-[(4-methylphenyl)sulfonyl]-α-D-arabino-furanosyl]-2-nitro- **Synonymes:** 1-(2,3-Diacetyl-5-tosyl-(-D-arabinofuranosyl)-2-nitroimidazole; FAZA-Precursor **Literature:** Piert M. et al. Hypoxia-Specific Tumor Imaging with ^{18}F-Fluoroazomycin Arabinoside. J. Nucl. Med. 2005, 46, 106-113.	**1450.0005: 5 mg per vial** **1450.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1451	**1-(5-Deoxy-5-fluoro-α-D-arabinofuranosyl)-2-nitroimidazole** **Reference standard for [^{18}F]FAZA ([^{18}F]Fluoroazomycin Arabinoside)** $C_8H_{10}FN_3O_5$ **Molar Mass:** 247.18 [220793-03-3] Colourless to yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 1H-Imidazole, 1-(5-deoxy-5-fluoro-α-D-arabino-furanosyl]-2-nitro- **Synonymes:** 1-(5-deoxy-5-fluoro-(-D-arabinofuranosyl)-2-nitroimidazole; FAZA **Literature:** Piert M. et al. Hypoxia-Specific Tumor Imaging with ^{18}F-Fluoroazomycin Arabinoside. J. Nucl. Med. 2005, 46, 106-113.	**1451.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1452	**N-(2-Tosyloxyethyl)phthalimide** **Tosyl Precursor for [^{18}F]FETA (FETA-Precursor I) ([^{18}F]Fluoroetanidazole)** $C_{17}H_{15}NO_5S$ **Molar Mass:** 345.37 [5460-83-3] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 1H-Isoindole-1,3(2H)-dione, 2-[2-[[(4-methylphenyl)sulfonyl]oxy]ethyl]- **Synonymes:** 2-Hydroxyethylphthalimide tosylate; N-(2-Tosyloxyethyl)phthalimide; N-[2-[[(4-tolyl)sulfonyl]oxy]ethyl]phthalimide; NSC 19429; p-Toluenesulfonic acid 2-(phthalimidyl)ethyl ester **Literature:** Wilson H. A simplified synthesis of 2,3,5,6-tetrafluorophenyl 2-(2-nitroimidazol-1-yl)acetate. J. Labelled Compd. Radiopharm. 2003, 46, 511-513. Tewson T.J. Synthesis of [^{18}F]Fluoroetanidazole: A Potential New Tracer for Imaging Hypoxia. Nucl. Med. Biol. 1997, 24, 755-760.	**1452.0050: 50 mg per vial** **1452.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1453	**2,3,5,6-Tetrafluorophenyl-2-(2-nitroimidazol-1-yl)acetate** **Tetrafluorphenyl-Precursor for [^{18}F]FETA (FETA-Precursor II) ([^{18}F]Fluoroetanidazole)** $C_{11}H_5F_4N_3O_4$ **Molar Mass:** 319.17 [199734-70-8] Tan solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 1H-Imidazole-1-acetic acid, 2-nitro-, 2,3,5,6-tetrafluorophenyl ester **Synonymes:** 2-Nitro-1H-imidazole-1-acetic acid 2,3,5,6-tetrafluorophenyl ester; 2,3,5,6-Tetrafluorophenyl-2-(2-nitroimidazol-1-yl)acetate **Literature:** Wilson H. A simplified synthesis of 2,3,5,6-tetrafluorophenyl 2-(2-nitroimidazol-1-yl)acetate. J. Labelled Compd. Radiopharm. 2003, 46, 511-513. Tewson T.J. Synthesis of [^{18}F]Fluoroetanidazole: A Potential New Tracer for Imaging Hypoxia. Nucl. Med. Biol. 1997, 24, 755-760.	**1453.0050: 50 mg per vial** **1453.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

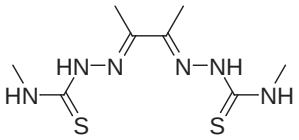
Product Number	Product	Order number / Unit
1454	**N-(2-Fluoroethyl)-2-(2-nitroimidazol-1-yl)acetamide** **Reference standard for [^{18}F]FETA ([^{18}F]Fluoroetanidazole)** $C_7H_9FN_4O_3$ **Molar Mass:** 216.17 [199800-19-6] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 1H-Imidazole-1-acetamide, N-(2-fluoroethyl)-2-nitro- **Synonymes:** Fluoroetanidazole	**1454.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**

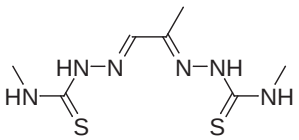


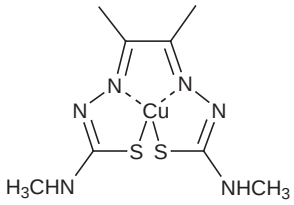
Literature:

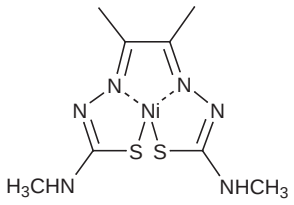
Wilson H. A simplified synthesis of 2,3,5,6-tetrafluorophenyl 2-(2-nitroimidazol-1-yl)acetate. J. Labelled Compd. Radiopharm. 2003, 46, 511-513.

Tewson T.J. Synthesis of [^{18}F]Fluoroetanidazole: A Potential New Tracer for Imaging Hypoxia. Nucl. Med. Biol. 1997, 24, 755-760.

Product Number	Product	Order number / Unit
1455	**ATSM** **Complexation agent for [*Cu]-Labelling** $C_8H_{16}N_6S_2$ **Molar Mass:** 260.39 [63618-91-7] Colourless to yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Hydrazinecarbothioamide, 2,2´-(1,2-dimethyl-1,2-ethanediylidene)bis[N-methyl- **Synonymes:** H_2ATSM; Diacetyl bis(N4-methylthiosemicarbazone); 2,3-Butanedione bis(4-methylthiosemicarbazone); ATSM (ligand) **Literature:** Szajek L.P. et al. Semi-remote production of [64Cu]CuCl2 and preparation of high specific activity [64Cu]Cu-ATSM for PET studies. Radiochim. Acta 2005, 93, 239-244. Fujibayashi Y. et al. Copper-62-ATSM: A new Hypoxia Imaging Agent with high Membrane Permeability and Low Redox Potential J. Nucl. Med. 1997, 38, 1150-1160. Green M.A. et al. Copper-62-Labeled Pyruvaldehyde Bis(N4-methylthiosemicarbazonato)copper(II): Synthesis and Evaluation as a Positron Emission Tomography Tracer for Cerebral and Myocardial Perfusion J. Nucl. Med. 1990, 31, 1989-1996.	**1455.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1456	**PTSM** **Complexation agent for [*Cu]-Labelling** $C_7H_{14}N_6S_2$ **Molar Mass:** 246.36 [673-68-7] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index names: Hydrazinecarbothioamide, 2,2´-(1-methyl-1,2-ethanediylidene)bis[N-methyl-; Pyruvaldehyde, bis(4-methyl-3-thiosemicarbazone); Semicarbazide, 1,1´-methylethanediylidene)bis[4-methyl-3-thio- **Synonymes:** Pyruvaldehyde bis(N4-methylthiosemicarbazone); Methylglyoxal bis-4-methylthiosemicarbazone **Literature:** Green M.A. et al. Copper-62-Labeled Pyruvaldehyde Bis(N4-methylthiosemicarbazonato)copper(II): Synthesis and Evaluation as a Positron Emission Tomography Tracer for Cerebral and Myocardial Perfusion J. Nucl. Med. 1990, 31, 1989-1996. Jalilian A. et al. Development of [103Pd]-labeled-bis(N4-methylthiosemi-carbazone) complexes as possible therapeutic agents. Radiochim. Acta 2009, 94, 865-869.	**1456.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1457	**CuATSM** **Reference standard for [*Cu]CuATSM** $C_8H_{14}CuN_6S_2$ **Molar Mass:** 321.92 [68341-09-3] Dark brown solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** CA index name: Copper, [[2,2´-(1,2-dimethyl-1,2-ethanediylidene)bis[N-methylhydrazinecarbothioamidato-kappaN2,kappaS]](2-)]-, (SP-4-2)- **Synonymes:** Copper, [[2,2´-(1,2-dimethyl-1,2-ethanediylidene)bis[N-methylhydrazinecarbothioamidato]](2-)-N2,N2´,S,S´]-, (SP-4-2)-Hydrazinecarbothioamide, 2,2´-(1,2-dimethyl-1,2-ethanediylidene)bis[N-methyl-, copper complex; Cu-diacetyl-bis(N4-methylthiosemicarbazone **Literature:** Holland J.P. et al.Functionalized Bis(thiosemicarbazonato) Complexes of Zinc and Copper: Synthetic Platforms Toward Site-Specific Radiopharmaceuticals. Inorg. Chem. 2007, 46, 465-485.	**1457.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1459	**NiATSM** **Reference standard for [*Ni]NiATSM** $C_8H_{14}N_6NiS_2$ **Molar Mass:** 317.06 [30193-04-5] Black solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Nickel, [[2,2α-(1,2-dimethyl-1,2-ethanediylidene)bis[N-methylhydrazinecarbothioamidato-κN2,κS]](2-)]-, (SP-4-2)- **Synonymes:** Nickel, [[2,3-butanedione bis(4-methyl-3-thiosemicarbazonato)](2-)]- **Literature:** no literature reference available	**1459.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1460	**(R)-SCH-24518 hydrochloride** **Precursor for [^{11}C]SCH-23390**	**1460.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_{16}H_{16}ClNO \cdot HCl$ **Molar Mass:** 310.22

[128145-75-5]

Yellowish solid packaged in dark glass screw cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H and ^{13}C NMR spectra; optical rotation

Chemical Name:
CA index name: 1H-3-Benzazepin-7-ol,
8-chloro-2,3,4,5-tetrahydro-5-phenyl-, hydrochloride, (5R)-

Synonymes:
8-Chloro-2,3,4,5-tetrahydro-5-phenyl-1H-3-benzazepin-7-ol, hydrochloride, (R); R-(+)-SCH-24518 HCl;
nor-Methyl-R-(+)-SCH-23390 hydrochloride; Nor-R-SCH 23390;
(R)-normethyl-SCH 23390 hydrochloride

Literature:

DeJesus O.T. et al. Characterisation of [^{11}C]SCH 23390 and its possible metabolites in primate blood using high performance liquid chromatography. J. Radioanalytical Nucl. Chem. 1988, 125, 65-73.

Ram S. et al. Synthesis of the Labelled D_1 Receptor Antagonist SCH 23390 Using [^{11}C]Carbon dioxide. Appl. Radiat. Isot. 1989, 40, 425-427.

Halldin C. et al. Preparation of [^{11}C]-Labelled SCH 23390 for the in vivo Study of Dopamine D-1 Receptors using Positron Emission Tomography. Appl. Radiat. Isot. 1986, 37, 1039-1043.

DeJesus O.T. et al. Synthesis of [^{11}C]SCH 23390 for Dopamine D1 receptor Studies. Appl. Radiat. Isot. 1987, 38, 345-348.

Product Number	Product	Order number / Unit
1462	**(S)-SCH-24518 hydrochloride** **Precursor for [^{11}C]SCH-23388**	**1462.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_{16}H_{16}ClNO \cdot HCl$ **Molar Mass:** 310.22

[1217462-17-3]
[135556-21-7] (free base)

Yellowish solid packaged in dark glass screw cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H and ^{13}C NMR spectra; optical rotation

Chemical Name:
CA index name: 1H-3-Benzazepin-7-ol,
8-chloro-2,3,4,5-tetrahydro-5-phenyl-, hydrochloride (1:1), (5S)-

Synonymes:
1H-3-Benzazepin-7-ol, 8-chloro-2,3,4,5-tetrahydro-5-phenyl-, hydrochloride, (5S)-;
8-Chloro-2,3,4,5-tetrahydro-5-phenyl-1H-3-benzazepin-7-ol, hydrochloride, (S); S-(-)-SCH-24518 HCl;
nor-Methyl-S-(-)-SCH-23388 hydrochloride; Nor-S-SCH 23388;
(S)-normethyl-SCH 23388 hydrochloride

Literature:

DeJesus O.T. et al. Characterisation of [^{11}C]SCH 23390 and its possible metabolites in primate blood using high performance liquid chromatography. J. Radioanalytical Nucl. Chem. 1988, 125, 65-73.

Ram S. et al. Synthesis of the Labelled D_1 Receptor Antagonist SCH 23390 Using [^{11}C]Carbon dioxide. Appl. Radiat. Isot. 1989, 40, 425-427.

Halldin C. et al. Preparation of [^{11}C]-Labelled SCH 23390 for the in vivo Study of Dopamine D-1 Receptors using Positron Emission Tomography. Appl. Radiat. Isot. 1986, 37, 1039-1043.

DeJesus O.T. et al. Synthesis of [^{11}C]SCH 23390 for Dopamine D1 receptor Studies. Appl. Radiat. Isot. 1987, 38, 345-348.

Product Number	Product	Order number / Unit
1464	**SCH-23390 hydrochloride** **Reference standard for [^{11}C]SCH-23390**	**1464.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**

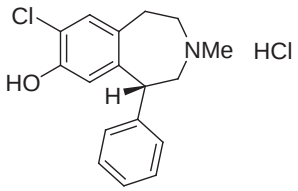
$C_{17}H_{18}ClNO \cdot HCl$ **Molar Mass:** 324.24

[125941-87-9]

Colourless solid packaged in dark glass screw cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H and ^{13}C NMR spectra; optical rotation



Chemical Name:
CA index name: 1H-3-Benzazepin-7-ol,
8-chloro-2,3,4,5-tetrahydro-3-methyl-5-phenyl-, hydrochloride, (5R)-

Synonymes:
1H-3-Benzazepin-7-ol,
8-chloro-2,3,4,5-tetrahydro-3-methyl-5-phenyl-, hydrochloride,
(5S)-; 8-Chloro-2,3,4,5-tetrahydro-3-methyl-5-phenyl-1H-3-
benzazepin-7-ol, hydrochloride, (S); Sch 23388 hydrochloride;
SCH23388 HCl; S-(-)-7-Chloro-8-hydroxy-3-methyl-1-phenyl-
2,3,4,5-tetrahydro-1H-3-benzazepine, hydrochloride

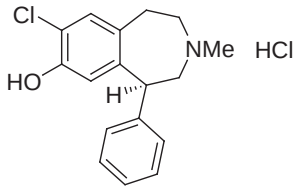
Literature:

DeJesus O.T. et al. Characterisation of [^{11}C]SCH 23390 and its possible metabolites in primate blood using high performance liquid chromatography. J. Radioanalytical Nucl. Chem. 1988, 125, 65-73.

Ram S. et al. Synthesis of the Labelled D_1 Receptor Antagonist SCH 23390 Using [^{11}C]Carbon dioxide. Appl. Radiat. Isot. 1989, 40, 425-427.

Halldin C. et al. Preparation of [^{11}C]-Labelled SCH 23390 for the in vivo Study of Dopamine D-1 Receptors using Positron Emission Tomography. Appl. Radiat. Isot. 1986, 37, 1039-1043.

DeJesus O.T. et al. Synthesis of [^{11}C]SCH 23390 for Dopamine D1 receptor Studies. Appl. Radiat. Isot. 1987, 38, 345-348.

Product Number	Product	Order number / Unit
1466	**SCH-23388 hydrochloride** **Reference standard for [^{11}C]SCH-23388** $C_{17}H_{18}ClNO \cdot HCl$ **Molar Mass:** 324.24 [1217443-99-6] [73445-63-3] (free base) Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra; optical rotation **Chemical Name:** CA index name: 1H-3-Benzazepin-7-ol, 8-chloro-2,3,4,5-tetrahydro-3-methyl-5-phenyl-, hydrochloride (1:1), (5S)- **Synonymes:** 1H-3-Benzazepin-7-ol, 8-chloro-2,3,4,5-tetrahydro-3-methyl-5-phenyl-, hydrochloride, (5S)-; 8-Chloro-2,3,4,5-tetrahydro-3-methyl-5-phenyl-1H-3-benzazepin-7-ol, hydrochloride, (S); Sch 23388 hydrochloride; SCH23388 HCl; S-(-)-7-Chloro-8-hydroxy-3-methyl-1-phenyl-2,3,4,5-tetrahydro-1H-3-benzazepine, hydrochloride	**1466.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

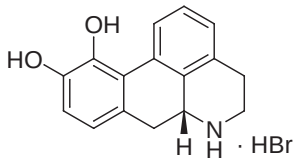
Literature:

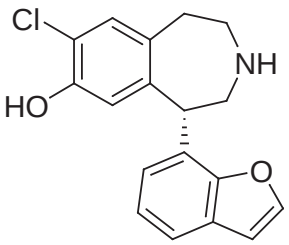
DeJesus O.T. et al. Characterisation of [^{11}C]SCH 23390 and its possible metabolites in primate blood using high performance liquid chromatography. J. Radioanalytical Nucl. Chem. 1988, 125, 65-73.

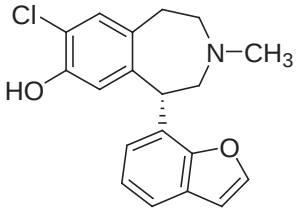
Ram S. et al. Synthesis of the Labelled D_1 Receptor Antagonist SCH 23390 Using [^{11}C]Carbon dioxide. Appl. Radiat. Isot. 1989, 40, 425-427.

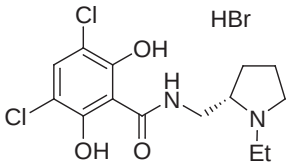
Halldin C. et al. Preparation of [^{11}C]-Labelled SCH 23390 for the in vivo Study of Dopamine D-1 Receptors using Positron Emission Tomography. Appl. Radiat. Isot. 1986, 37, 1039-1043.

DeJesus O.T. et al. Synthesis of [^{11}C]SCH 23390 for Dopamine D1 receptor Studies. Appl. Radiat. Isot. 1987, 38, 345-348.

Product Number	Product	Order number / Unit
1477	**(R)-(-)-Norapomorphine hydrobromide** **Precursor for [^{11}C]-(-)-NPA and [^{11}C]-(-)-NMA ([^{11}C]-(-)-N-Propyl-norapomorphine and [^{11}C]-(-)-N-Methyl-norapomorphine)** Photosensitive! $C_{16}H_{15}NO_2 \cdot$ HBr **Molar Mass:** 334.21 [115017-61-3] [478-76-2] (free base) Colourless to yellowish solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 4H-Dibenzo[de,g]quinoline-10,11-diol, 5,6,6a,7-tetrahydro-, hydrobromide, (6aR)- **Synonymes:** 4H-Dibenzo[de,g]quinoline-10,11-diol, 5,6,6a,7-tetrahydro-, hydrobromide, (R)-; R-(-)-Norapomorphine hydrobromide; R-(-)-Norapomorphine · HBr **Literature:** Hwang D.-R. et al. (-)-N-[^{11}C]propyl-norapomorphine: a positron-labeled dopamine agonist for PET imaging of D_2 receptors. Nucl. Med. Biol. 2000, 27, 533-539. Narendran R. et al. In vivo vulnerability to competition by endogenous dopamine: Comparison of the D_2 receptor agonist radiotracer (-)-N-[^{11}C]propyl-norapomorphine ([^{11}C]NPA) with the D_2 receptor antagonist radiotracer [^{11}C]-raclopride. Synapse 2004, 52, 188-208. Zijlstra S. et al. Synthesis and in vivo distribution in the rat of a dopamine agonist: N-([^{11}C]methyl)norapomorphine. Nucl. Med. Biol. 1993, 20, 7-12.	**1477.0002: 2 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1480	**(+)-Desmethyl-NNC112** **Precursor for [^{11}C]NNC112** $C_{18}H_{16}ClNO_2$ **Molar Mass:** 313.78 [221132-62-3] Off-white solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 1H-3-Benzazepin-7-ol, 5-(7-benzofuranyl)-8-chloro-2,3,4,5-tetrahydro-, (5S)- **Synonymes:** (S)-Desmethyl-NNC 112 **Literature:** Halldin C. et al. Carbon-11-NNC 112 : A Radioligand for PET Examination of Striatal and Neocortical D1-Dopamine Receptors. J. Nucl. Med. 1998, 39, 2061-2068.	**Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1490	**(+)-NNC112** **Reference standard for [^{11}C]NNC112** $C_{19}H_{18}ClNO_2$ **Molar Mass:** 327.80 [125341-24-4] Off-white solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 1H-3-Benzazepin-7-ol, 5-(7-benzofuranyl)-8-chloro-2,3,4,5-tetrahydro-3-methyl-, (5S)- **Synonymes:** 1H-3-Benzazepin-7-ol, 5-(7-benzofuranyl)-8-chloro-2,3,4,5-tetrahydro-3-methyl-, (S)-; (+)-NNC 112; NNC 01-112; NNC 0112; (+)-8-Chloro-5-(7-benzofuranyl)-7-hydroxy-3-methyl-2,3,4,5-tetrahydro-1H-3-benzazepine **Literature:** Halldin C. et al. Carbon-11-NNC 112 : A Radioligand for PET Examination of Striatal and Neocortical D1-Dopamine Receptors. J. Nucl. Med. 1998, 39, 2061-2068.	**Please inquire for customized filling and bulk quantities.** 

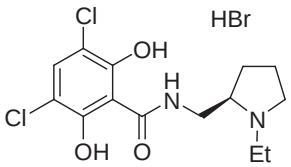
Product Number	Product	Order number / Unit
1500	**(S)-O-Desmethylraclopride hydrobromide** **Precursor for [^{11}C]Raclopride** $C_{14}H_{18}Cl_2N_2O_3 \cdot HBr$ **Molar Mass:** 414.12 [113310-88-6] Colourless to yellowish solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum; HPLC **Chemical Name:** CA index name: Benzamide hydrobromide, 3,5-dichloro-N-[(1-ethyl-2-pyrrolidinyl)methyl]-2,6-dihydroxy-, (S)- **Synonymes:** (S)-3,5-Dichloro-N-[(1-ethyl-2-pyrrolidinyl)methyl]-2,6-dihydroxy-benzamide hydrobromide	**1500.0001: 1 mg per vial** **1500.0002: 2 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Langer O. et al. Precursor Synthesis and Radiolabelling of the Dopamine D2 Receptor Ligand [^{11}C]Raclopride from [^{11}C]methyl triflate. J. Labelled Compd. Radiopharm. 1999, 42, 1183-1193.

Hoegberg T. et al. Synthesis of [Methoxy-3H]- and [Methoxy-^{11}C]- Labelled Raclopride. Specific Dopamine-D2 Receptor Ligands. J. Labelled Compd. Radiopharm. 1987, 24, 931-940.

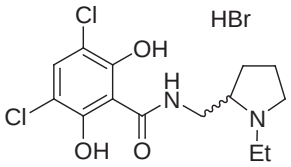
De Paulis T. et al. Potential Neuroleptic Agents. 4. Chemistry, Behavioral Pharmacology, and Inhibition of [^{3}H]Spiperone Binding of 3,5-Disubstituted N-[(1-Ethyl-2-pyrrolidinyl)methyl]-6-methoxy-salicylamides. J. Med. Chem. 1986, 29, 61-69.

Product Number	Product	Order number / Unit
1501	**(R)-O-Desmethylraclopride hydrobromide** **Precursor for [^{11}C]Raclopride** $C_{14}H_{18}Cl_2N_2O_3 \cdot HBr$ **Molar Mass:** 414.12 [113310-87-5] Colourless to yellowish solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum; HPLC **Chemical Name:** CA index name: Benzamide hydrobromide, 3,5-dichloro-N-[(1-ethyl-2-pyrrolidinyl)methyl]-2,6-dihydroxy-, (R)- **Synonymes:** (R)-3,5-Dichloro-N-[(1-ethyl-2-pyrrolidinyl)methyl]-2,6-dihydroxy-benzamide hydrobromide	**1501.0001: 1 mg per vial** **1501.0002: 2 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Hoegberg T. et al. Synthesis of [Methoxy-3H]- and [Methoxy-^{11}C]- Labelled Raclopride. Specific Dopamine-D2 Receptor Ligands. J. Labelled Compd. Radiopharm. 1987, 24, 931-940.

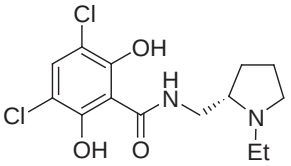
Farde L. et al. Stereoselective binding of ^{11}C-raclopride in living human brain - a search for extrastriatal central D2-dopamine receptors by PET. Psychopharmacology (Berlin, Germany) 1988, 94, 471-8.

Product Number	Product	Order number / Unit
1502	**(R,S)-O-Desmethylraclopride hydrobromide** **Precursor for [^{11}C]Raclopride** $C_{14}H_{18}Cl_2N_2O_3 \cdot HBr$ **Molar Mass:** 414.12 [857335-91-2] (free base) Colourless to yellowish solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum; HPLC **Chemical Name:** Benzamide, 3,5-dichloro-N-[(1-ethyl-2-pyrrolidinyl)methyl]-2,6-dihydroxy-, hydrobromide salt **Synonymes:** 3,5-Dichloro-N-[(1-ethyl-2-pyrrolidinyl)methyl]-2,6-dihydroxy-benzamide hydrobromide	**1502.0001: 1 mg per vial** **1502.0002: 2 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Hoegberg T. et al. Synthesis of [Methoxy-3H]- and [Methoxy-^{11}C]- Labelled Raclopride. Specific Dopamine-D2 Receptor Ligands. J. Labelled Compd. Radiopharm. 1987, 24, 931-940.

Farde L. et al. Stereoselective binding of ^{11}C-raclopride in living human brain - a search for extrastriatal central D2-dopamine receptors by PET. Psychopharmacology (Berlin, Germany) 1988, 94, 471-8.

Product Number	Product	Order number / Unit
1510	**(S)-O-Desmethylraclopride** **Precursor for [^{11}C]Raclopride** $C_{14}H_{18}Cl_2N_2O_3$ **Molar Mass:** 333.21 [119670-11-0] Yellowish solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum; HPLC **Chemical Name:** CA index name: Benzamide, 3,5-dichloro-N-[(1-ethyl-2-pyrrolidinyl)methyl]-2,6-dihydroxy-, (S)- **Synonymes:** (S)-3,5-Dichloro-N-[(1-ethyl-2-pyrrolidinyl)methyl]-2,6-dihydroxy-benzamide	**1510.0001: 1 mg per vial** **1510.0002: 2 mg per vial** **Please inquire for customized filling and bulk quantities.** 

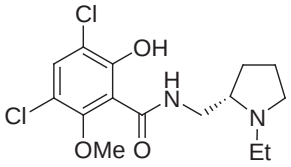
Literature:

Langer O. et al. Precursor Synthesis and Radiolabelling of the Dopamine D2 Receptor Ligand [^{11}C]Raclopride from [^{11}C]methyl triflate. J. Labelled Compd. Radiopharm. 1999, 42, 1183-1193.

Hoegberg T. et al. Synthesis of [Methoxy-3H]- and [Methoxy-^{11}C]- Labelled Raclopride. Specific Dopamine-D2 Receptor Ligands. J. Labelled Compd. Radiopharm. 1987, 24, 931-940.

De Paulis T. et al. Potential Neuroleptic Agents. 4. Chemistry, Behavioral Pharmacology, and Inhibition of [^{3}H]Spiperone Binding of 3,5-Disubstituted N-[(1-Ethyl-2-pyrrolidinyl)methyl]-6-methoxy-salicylamides. J. Med. Chem. 1986, 29, 61-69.

Product Number	Product	Order number / Unit
1520	**Raclopride** **Reference standard for [^{11}C]Raclopride**	**1520.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**



$C_{15}H_{20}Cl_2N_2O_3$ **Molar Mass:** 347.24

[84225-95-6]

Yellowish solid packaged in dark glass screw cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H NMR spectrum; HPLC

Chemical Name:
CA index name: Benzamide, 3,5-dichloro-N-[[(2S)-1-ethyl-2-pyrrolidinyl]methyl]-2-hydroxy-6-methoxy-

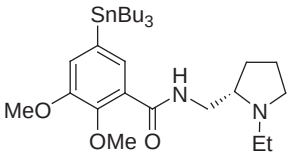
Synonymes:
(2S)-3,5-Dichloro-N-[(1-ethyl-2-pyrrolidinyl)methyl]-6-hydroxy-2-methoxybenzamide;
(2S)-3,5-dichloro-N-[(1-ethyl-2-pyrrolidinyl)-methyl]-6-methoxysalicylamide

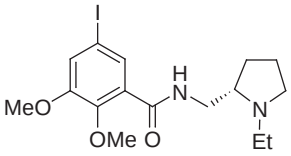
Literature:

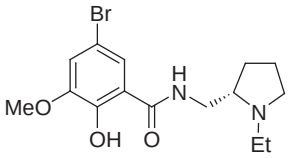
Langer O. et al. Precursor Synthesis and Radiolabelling of the Dopamine D2 Receptor Ligand [^{11}C]Raclopride from [^{11}C]methyl triflate. J. Labelled Compd. Radiopharm. 1999, 42, 1183-1193.

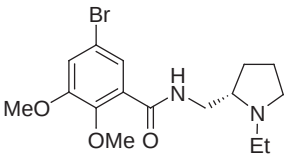
Hoegberg T. et al. Synthesis of [Methoxy-3H]- and [Methoxy-^{11}C]- Labelled Raclopride. Specific Dopamine-D2 Receptor Ligands. J. Labelled Compd. Radiopharm. 1987, 24, 931-940.

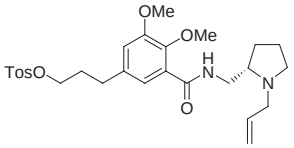
De Paulis T. et al. Potential Neuroleptic Agents. 4. Chemistry, Behavioral Pharmacology, and Inhibition of [^{3}H]Spiperone Binding of 3,5-Disubstituted N-[(1-Ethyl-2-pyrrolidinyl)methyl]-6-methoxy-salicylamides. J. Med. Chem. 1986, 29, 61-69.

Product Number	Product	Order number / Unit
1521	**Tin-epidepride precursor** **Precursor for [^{123}I]Epidepride and [^{125}I]Epidepride** **(S)-(-)-N-[(1-ethyl-2-pyrrolidinyl)methyl]-5-[^{123}I]iodo-2,3-dimethoxybenzamide** **(S)-(-)-N-[(1-ethyl-2-pyrrolidinyl)methyl]-5-[^{123}I]iodo-2,3-dimethoxybenzamide** $C_{28}H_{50}N_2O_3Sn$ **Molar Mass:** 581.42 [135382-47-7] Coloured oil packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum; HPLC **Chemical Name:** CA index name: Benzamide, N-[[(2S)-1-ethyl-2-pyrrolidinyl]methyl]-2,3-dimethoxy-5-(tributylstannyl)- **Synonymes:** N-(1-Ethyl-pyrrolidin-2-ylmethyl)-2,3-dimethoxy-5-tributylstannanyl-benzamide; Benzamide, N-[(1-ethyl-2-pyrrolidinyl)methyl]-2,3-dimethoxy-5-(tributylstannyl)-, (S)- **Literature:** Clanton J.A. et al. Preparation of [^{123}I]- and [^{125}I]epidepride: A dopamine D-2 receptor antagonist radioligand. J. Labelled Compd. Radiopharm. 1991, 29, 745-751.	**Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1522	**Epidepride** **Reference standard for [^{123}I]Epidepride and [^{125}I]Epidepride** **(S)-(-)-N-[(1-ethyl-2-pyrrolidinyl)methyl]-5-[^{123}I]iodo-2,3-dimethoxybenzamide** **(S)-(-)-N-[(1-ethyl-2-pyrrolidinyl)methyl]-5-[^{123}I]iodo-2,3-dimethoxybenzamide** $C_{16}H_{23}IN_2O_3$ **Molar Mass:** 481.27 [107188-87-4] Coloured oil packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum; HPLC **Chemical Name:** CA index name: Benzamide, N-[[(2S)-1-ethyl-2-pyrrolidinyl]methyl]-5-iodo-2,3-dimethoxy- **Synonymes:** (-)-N-[[(2S)-1-Ethylpyrrolidin-2-yl]methyl]-5-iodo-2,3-dimethoxybenzamide; N-(1-Ethyl-pyrrolidin-2-ylmethyl)-5-iodo-2,3-dimethoxy-benzamide; Benzamide, N-[(1-ethyl-2-pyrrolidinyl)methyl]-5-iodo-2,3-dimethoxy-, (S)- **Literature:** Clanton J.A. et al. Preparation of [^{123}I]- and [^{125}I]epidepride: A dopamine D-2 receptor antagonist radioligand. J. Labelled Compd. Radiopharm. 1991, 29, 745-751.	**Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1530	**FLB 604** **Precursor for [^{11}C]FLB 457** $C_{15}H_{21Br}N_2O_3$ **Molar Mass:** 357.24 [128600-22-6] Colourless crystals packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Benzamide, 5-bromo-N-[[(2S)-1-ethyl-2-pyrrolidinyl]methyl]-2-hydroxy-3-methoxy **Synonymes:** nor-FLB 457; (-)-(S)-5-Bromo-N-[(1-ethyl-2-pyrrolidinyl)methyl]-2-hydroxy-3-methoxybenzamide **Literature:** Langer O. et al. A General Method for the Synthesis of Raclopride, FLB 457 and Epidepride and Corresponding Desmethyl-Precursors. J. Labelled Compd. Radiopharm. 1999, 42, S366-S368. Abstract of the XIIIth International Symposium on Radiopharmaceutical Chemistry (St. Louis 1999). Hoegberg T. et al. Potential Antipsychotic Agents. 7. Synthesis and Antidopaminergic Properties of the Atypical Highly Potent (S)-5-Bromo-2,3-dimethoxy-N-[(1-ethyl-2-pyrrolidinyl)methyl]benzamide and Related Compounds - A Comparative Study. J. Med. Chem. 1990, 33, 2305-2309.	**1530.0001: 1 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1540	**FLB 457** **Reference standard for [^{11}C]FLB 457** **Selective D2 receptor antagonist** $C_{16}H_{23}BrN_2O_3$ **Molar Mass:** 371.27 [107188-74-9] Yellowish viscous oil packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Benzamide, 5-bromo-N-[[(2S)-1-ethyl-2-pyrrolidinyl]methyl]-2,3-dimethoxy- **Synonymes:** Benzamide, 5-bromo-2,3-dimethoxy-N-[(1-ethyl-2-pyrrolidinyl]methyl]-, (S)-; (-)-(S)-5-Bromo-2,3-dimethoxy-N-[(1-ethyl-2-pyrrolidinyl)methyl]-benzamide; Isoremoxipride **Literature:** Langer O. et al. A General Method for the Synthesis of Raclopride, FLB 457 and Epidepride and Corresponding Desmethyl-Precursors. J. Labelled Compd. Radiopharm. 1999, 42, S366-S368. Abstract of the XIIIth International Symposium on Radiopharmaceutical Chemistry (St. Louis 1999). Hoegberg T. et al. Potential Antipsychotic Agents. 7. Synthesis and Antidopaminergic Properties of the Atypical Highly Potent (S)-5-Bromo-2,3-dimethoxy-N-[(1-ethyl-2-pyrrolidinyl)methyl]benzamide and Related Compounds - A Comparative Study. J. Med. Chem. 1990, 33, 2305-2309.	**1540.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

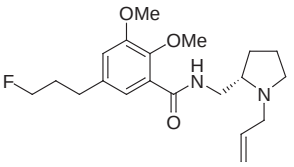
Product Number	Product	Order number / Unit
1550	**Tosyl-Fallypride** **Precursor for [^{18}F]Fallypride** $C_{27}H_{36}N_2O_6S$ **Molar Mass:** 516.65 [166173-74-6] Colourless to yellowish oil packaged in dark glass crimp cap vials. **Purity:** > 90 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Benzamide, 2,3-dimethoxy-5-[3-[[(4-methylphenyl)sulfonyl]oxy]propyl]-N-[[1-(2-propenyl)-2-pyrrolidinyl]methyl]-, (S)- **Synonymes:** (S)-2,3-dimethoxy-5-[3-[[(4-methylphenyl)-sulfonyl]oxy]-propyl]-N-[[1-(2-propenyl)-2-pyrrolidinyl]methyl]-benzamide	**1550.0002: 2 mg per vial** **1550.0003: 3 mg per vial** **1550.0004: 4 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Mukherjee J. et al. Preliminary Assessment of Extrastriatal Dopamine D-2 Receptor Binding in the Rodent and Nonhuman Primat Brains Using the High Affinity Radioligand, [^{18}F]-Fallypride. Nucl. Med. Biol. 1999, 26, 519-527.

Mukherjee J. et al. Fluorinated Benzamide Neuroleptics - III. Development of (S)-N-[(1-allyl-2-pyrrolidinyl)methyl]-[3-[^{18}F]fluoro-propyl)dimethoxybenzamide as an Improved Dopamine D-2 Receptor Tracer. Nucl. Med. Biol. 1995, 22, 283-296.

Mukherjee J. et al. Evaluation of d-Amphetamine Effects on the Binding of Dopamine D-2 Receptor Radioligand, [^{18}F]-Fallypride in Nonhuman Primates Using Positron Emission Tomography. Synapse 1997, 27, 1-13.

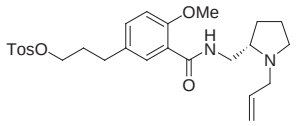
Product Number	Product	Order number / Unit
1560	**Fallypride** **Reference standard for [^{18}F]Fallypride** $C_{20}H_{29}FN_2O_3$ **Molar Mass:** 364.45 [166173-78-0] Colourless to yellowish oil packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: Benzamide, 5-(3-fluoropropyl)-2,3-dimethoxy-N-[[(2S)-1-(2-propenyl)-2-pyrrolidinyl]methyl]- **Synonymes:** (S)-5-(3-fluoropropyl)-2,3-dimethoxy-N-[[(2S)-1-(2-propenyl)-2-pyrrolidinyl]methyl]-	**1560.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

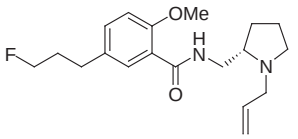
Literature:

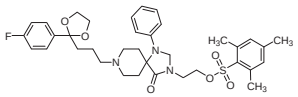
Mukherjee J. et al. Preliminary Assessment of Extrastriatal Dopamine D-2 Receptor Binding in the Rodent and Nonhuman Primat Brains Using the High Affinity Radioligand, [^{18}F]-Fallypride. Nucl. Med. Biol. 1999, 26, 519-527.

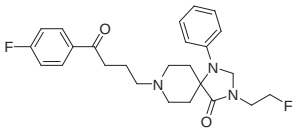
Mukherjee J. et al. Fluorinated Benzamide Neuroleptics - III. Development of (S)-N-[(1-allyl-2-pyrrolidinyl)methyl]-[3-[^{18}F]fluoro-propyl)dimethoxybenzamide as an Improved Dopamine D-2 Receptor Tracer. Nucl. Med. Biol. 1995, 22, 283-296.

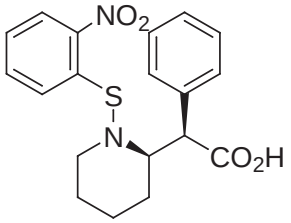
Mukherjee J. et al. Evaluation of d-Amphetamine Effects on the Binding of Dopamine D-2 Receptor Radioligand, [^{18}F]-Fallypride in Nonhuman Primates Using Positron Emission Tomography. Synapse 1997, 27, 1-13.

Product Number	Product	Order number / Unit
1570	**Tosyl-Desmethoxyfallypride** **Precursor for [^{18}F]Desmethoxyfallypride** $C_{26}H_{34}N_2O_5S$ **Molar Mass:** 486.62 [713135-14-9] Colourless to yellowish oil packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Benzamide, 2-methoxy-5-[3-[[(4-methylphenyl)sulfonyl]oxy]propyl]-N-[[1-(2-propenyl)-2-pyrrolidinyl]methyl]- **Synonymes:** DMFP-Precursor **Literature:** Roesch F. et al. Quantification of D2-like dopamine receptors in the human brain with ^{18}F-desmethoxyfallypride. J. Nucl. Med. 2003, 44, 109-116. Mukherjee J. et al. ^{18}F-Desmethoxyfallypride: a fluorine-18 labeled radiotracer with properties similar to carbon-11 raclopride for PET imaging studies of dopamine D2 receptors. Life Sciences 1996, 59, 669-678. Mukherjee J. et al. Fluorinated Benzamide Neuroleptics - III. Development of (S)-N-[(1-allyl-2-pyrrolidinyl)methyl]-[3-[^{18}F]fluoro-propyl)dimethoxybenzamide as an Improved Dopamine D-2 Receptor Tracer. Nucl. Med. Biol. 1995, 22, 283-296. Mukherjee J. et al. Fluorinated Benzamide Neuroleptics - II. Synthesis and Radiosynthesis of (S)-N-[(1-ethyl-2-pyrrolidinyl)methyl]-5-(3-[^{18}F]fluoropropyl)-3-substituted-2-methoxybenzamides. Appl. Radiat. Isot. 1991, 42, 713-721.	**1570.0002: 2 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1580	**Desmethoxyfallypride** **Reference standard for [^{18}F]Desmethoxyfallypride** $C_{19}H_{27}FN_2O_2$ **Molar Mass:** 334.43 [166173-81-5] Colourless to brownish oil packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: Benzamide, 5-(3-fluoropropyl)-2-methoxy-N-[[1-(2-propenyl)-2-pyrrolidinyl]-methyl], (S)- **Synonymes:** DMFP **Literature:** Roesch F. et al. Quantification of D2-like dopamine receptors in the human brain with ^{18}F-desmethoxyfallypride. J. Nucl. Med. 2003, 44, 109-116. Mukherjee J. et al. ^{18}F-Desmethoxyfallypride: a fluorine-18 labeled radiotracer with properties similar to carbon-11 raclopride for PET imaging studies of dopamine D2 receptors. Life Sciences 1996, 59, 669-678. Mukherjee J. et al. Fluorinated Benzamide Neuroleptics - III. Development of (S)-N-[(1-allyl-2-pyrrolidinyl)methyl]-[3-[^{18}F]fluoro-propyl)dimethoxybenzamide as an Improved Dopamine D-2 Receptor Tracer. Nucl. Med. Biol. 1995, 22, 283-296. Mukherjee J. et al. Fluorinated Benzamide Neuroleptics - II. Synthesis and Radiosynthesis of (S)-N-[(1-ethyl-2-pyrrolidinyl)methyl]-5-(3-[^{18}F]fluoropropyl)-3-substituted-2-methoxybenzamides. Appl. Radiat. Isot. 1991, 42, 713-721.	**1580.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1590	**N-Mesitylenesulfonyloxy-ethyl-spiperone** **Precursor for 3-(2´-[^{18}F]Fluorethyl)spiperone** $C_{36}H_{44}FN_3O_6S$ **Molar Mass:** 665.82 [128584-73-6] Colourless to yellowish oil (partially crystallized) packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: Benzenesulfonic acid, 2,4,6-trimethyl-, 2-[8-[3-[4-(4-fluorophenyl)-1,3-dioxolan-2-yl]propyl]-4-oxo-1-phenyl-1,3,8-triazaspiro[4.5]decane **Synonymes:** 8-[4-(4-fluorophenyl)-4,4-(ethylendioxy)butyl]-3-[2´-(2,4,6-trimethylphenylsulfonyloxyethyl)]-1-phenyl-1,3,8-triazaspiro[4.5]decan-4-one **Literature:** Chi D.Y. et al. Synthesis of no carrier added N-(3-[^{18}F]fluoroalkyl)-spiperone derivatives. Appl. Radiat. Isot. 1986, 37, 1173-1180. Hamacher K. et al. Remote controlled one-step production of ^{18}F-labeled butyrophenone neuroleptics exemplified by the synthesis of n.c.a. [^{18}F]N-methylspiperone. Appl. Radiat. Isot. 1995, 46, 911-916.	**1590.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1591	**Fluoroethylspiperone** **Reference standard for 3-(2´-[^{18}F]Fluorethyl)spiperone** $C_{25}H_{29}F_2N_3O_2$ **Molar Mass:** 441.51 [106114-42-5] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 3-(2-fluoroethyl)-8-[4-(4-fluorophenyl)-4-oxobutyl]-1-phenyl-1,3,8-triazaspiro[4.5]decan-4-one **Synonymes:** FESP **Literature:** Moerlein S.M. et al. Effect of Lipophilicity on the in Vivo Localization of Radiolabelled spiperone Analogues Int. J. Nucl. Med. Biol. 1985, 12, 353-356. Chi D.Y. et al. Synthesis of no carrier added N-(3-[^{18}F]fluoroalkyl)-spiperone derivatives. Appl. Radiat. Isot. 1986, 37, 1173-1180. Coenen H.H. et al. 3-N-(2-[^{18}F]Fluorethyl)-spiperone: A novel ligand for cerebral dopamine receptor studies with PET Life Sciences 1987, 40, 81-88. Satyamurthy N. et al. 3-(2´[^{18}F]Fluorethyl)spiperone, a Potent Dopamine Antagonist: Synthesis, Structural Analysis and In-vivo Utilization in Humans Int. J. Rad. Appl. Instrum. A 1990, 41, 113-129. Hamacher K. et al. Remote controlled one-step production of ^{18}F-labeled butyrophenone neuroleptics exemplified by the synthesis of n.c.a. [^{18}F]N-methylspiperone. Appl. Radiat. Isot. 1995, 46, 911-916.	**1591.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

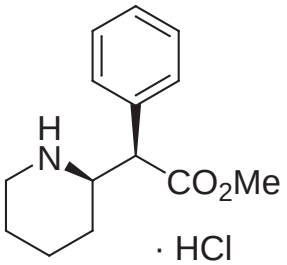
Product Number	Product	Order number / Unit
1592	**D-threo-N-NPS-Ritalinic acid** **Precursor for D-threo-[^{11}C]Methylphenidate** $C_{19}H_{20}N_2O_4S$ **Molar Mass:** 372.44 [159701-28-7] Yellow solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 2-Piperidineacetic acid, 1-[(2-nitrophenyl)thio]-α-phenyl-, [R-(R*,R*)]- **Synonymes:** N-NPS-Ritalinic acid	**1592.0050: 50 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Ding Y.-S. et al. Synthesis of the Racemate and Individual Enantiomers of [^{11}C]Methylphenidate for Studying Presynaptic Dopaminergic Neuro with Positron Emission Tomography. J. Labelled Compd. Radiopharm. 1994, XXIV, 989-997.

Studenov A.R. et al. An improved method for the radiosynthesis [^{11}C]d-threo-methylphenidate. J. Labelled Compd.Radiopharm. 2006, 49, 455-458.

Patt M. et al. Synthetic approaches and biodistribution studies of [^{11}C]methylphenidate. J. Pharm. Pharmaceutical Sci. 2007, 10, 312s-320s.

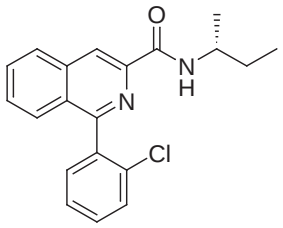
Product Number	Product	Order number / Unit
1593	**D-threo-Methylphenidate hydrochloride** **Reference standard for D-threo-[^{11}C]Methylphenidate** Controlled substance, license required in most countries. $C_{14}H_{19}NO_2 \cdot HCl$ **Molar Mass:** 269.77 [19262-68-1] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 2-Piperidineacetic acid, α-phenyl-, methyl ester, (αR,2R) **Synonymes:** 2-Piperidineacetic acid, α-phenyl-, methyl ester, [R-(R*,R*)]; (+)-threo-Methylphenidate; d-threo-Methylphenidate; Dexmethylphenidate; threo-(+)-Methylphenidate	**1593.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

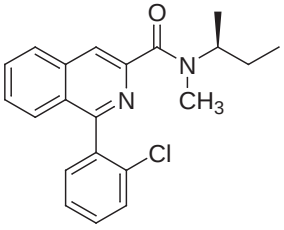
Literature:

Ding Y.-S. et al. Synthesis of the Racemate and Individual Enantiomers of [^{11}C]Methylphenidate for Studying Presynaptic Dopaminergic Neuro with Positron Emission Tomography. J. Labelled Compd. Radiopharm. 1994, XXIV, 989-997.

Studenov A.R. et al. An improved method for the radiosynthesis [^{11}C]d-threo-methylphenidate. J. Labelled Compd.Radiopharm. 2006, 49, 455-458.

Patt M. et al. Synthetic approaches and biodistribution studies of [^{11}C]methylphenidate. J. Pharm. Pharmaceutical Sci. 2007, 10, 312s-320s.

Product Number	Product	Order number / Unit
1600	**(R)-N-Desmethyl PK11195** **Precursor for (R)-[N-Methyl-^{11}C-]PK11195** $C_{20}H_{19}ClN_2O$ **Molar Mass:** 338.83 [157809-85-3] Colourless crystals packaged in dark glass crimp cap vials. **Purity:** > 99 % (HPLC) **Certificates:** CoA; ^{1}H NMR spectrum; HPLC **Chemical Name:** CA index name: 3-Isoquinolinecarboxamide, 1-(2-chlorophenyl)-N-(1-methylpropyl),-(R) **Synonymes:** 1-(2-Chlorophenyl)-N-(1-methylpropyl)-isoquinoline-3-carboxamide **Literature:** Camsonne R. et al. Synthesis of N-[^{11}C]methyl, N-(methyl-1-propyl), (chloro-2-phenyl)-1-isoquinoline carboxamide-3 (PK11195): a new ligand for peripheral benzodiazepine receptors. J. Labelled Compd. Radiopharm. 1984, 21, 985-991. Hashimoto K. et al. Synthesis and evaluation of ^{11}C-PK11195 for in vivo study of peripheral-type benzodiazepine receptors using positron emission tomography. Ann. Nucl. Med. 1989, 3, 63-71. Shah F. et al. Synthesis of the Enantiomers of [N-methyl-^{11}C]PK 11195 and Comparison of their Behaviours as Radioligands for PK Binding Sites in Rats. Nucl. Med. Biol. 1994, 21, 573-581. Cremer J.E. et al. The Distribution of Radioactivity in Brains of Rats Given [N-methyl-^{11}C]PK11195 In Vivo After Induction of a Cortical Ischaemic Lesion. Int. J. Rad. Appl. Instrum. B, 1992, 19, 159-166.	**1600.0001: 1 mg per vial** **1600.0002: 2 mg per vial** **Please inquire for customized filling and bulk quantities.** 

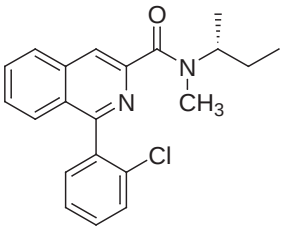
Product Number	Product	Order number / Unit
1609	**(S)-PK 11195** **Reference standard for analytical detection of (S)-[N-Methyl-^{11}C]PK11195.** $C_{21}H_{21}ClN_2O$ **Molar Mass:** 352.86 [205934-45-8] Colourless to yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum; HPLC **Chemical Name:** CA index name: 3-Isoquinolinecarboxamide, 1-(2-chlorophenyl)-N-methyl-N-[(1S)-1-methylpropyl]- **Synonymes:** 1-(2-Chlorophenyl)-N-methyl-N-(1-methylpropyl)-isoquinoline-3-carboxamide-, (S)- **Literature:** Camsonne R. et al. Synthesis of N-[^{11}C]methyl, N-(methyl-1-propyl), (chloro-2-phenyl)-1-isoquinoline carboxamide-3 (PK11195): a new ligand for peripheral benzodiazepine receptors. J. Labelled Compd. Radiopharm. 1984, 21, 985-991. Hashimoto K. et al. Synthesis and evaluation of ^{11}C-PK11195 for in vivo study of peripheral-type benzodiazepine receptors using positron emission tomography. Ann. Nucl. Med. 1989, 3, 63-71. Shah F. et al. Synthesis of the Enantiomers of [N-methyl-^{11}C]PK 11195 and Comparison of their Behaviours as Radioligands for PK Binding Sites in Rats. Nucl. Med. Biol. 1994, 21, 573-581. Cremer J.E. et al. The Distribution of Radioactivity in Brains of Rats Given [N-methyl-^{11}C]PK11195 In Vivo After Induction of a Cortical Ischaemic Lesion. Int. J. Rad. Appl. Instrum. B, 1992, 19, 159-166.	**1609.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1610	**(R)-PK11195** **Reference standard for (R)-[N-Methyl-^{11}C]PK11195**	**1610.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_{21}H_{21}ClN_2O$ **Molar Mass:** 352.86

[205934-46-9]

Colourless to yellowish solid packaged in dark glass screw cap vials.



Purity: > 95 %

Certificates:
CoA; ^{1}H NMR spectrum

Chemical Name:
CA index name: 3-Isoquinolinecarboxamide,
1-(2-chlorophenyl)-N-methyl-N-(1-methylpropyl)-, (R)

Synonymes:
1-(2-Chlorophenyl)-N-methyl-N-(1-methylpropyl)-isoquinoline-3-carboxamide-(R); PK 11195; RP 52028

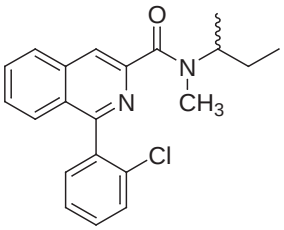
Literature:

Camsonne R. et al. Synthesis of N-[^{11}C]methyl, N-(methyl-1-propyl), (chloro-2-phenyl)-1-isoquinoline carboxamide-3 (PK11195): a new ligand for peripheral benzodiazepine receptors. J. Labelled Compd. Radiopharm. 1984, 21, 985-991.

Hashimoto K. et al. Synthesis and evaluation of ^{11}C-PK11195 for in vivo study of peripheral-type benzodiazepine receptors using positron emission tomography. Ann. Nucl. Med. 1989, 3, 63-71.

Shah F. et al. Synthesis of the Enantiomers of [N-methyl-^{11}C]PK 11195 and Comparison of their Behaviours as Radioligands for PK Binding Sites in Rats. Nucl. Med. Biol. 1994, 21, 573-581.

Cremer J.E. et al. The Distribution of Radioactivity in Brains of Rats Given [N-methyl-^{11}C]PK11195 In Vivo After Induction of a Cortical Ischaemic Lesion. Int. J. Rad. Appl. Instrum. B, 1992, 19, 159-166.

Product Number	Product	Order number / Unit
1611	**(R,S)-PK11195** **Reference standard for (R,S)-[N-Methyl-^{11}C]PK11195** $C_{21}H_{21}ClN_2O$ **Molar Mass:** 352.86 [85532-75-8] Yellowish oil packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 3-Isoquinolinecarboxamide, 1-(2-chlorophenyl)-N-methyl-N-(1-methylpropyl)-, (RS) **Synonymes:** 1-(2-Chlorophenyl)-N-methyl-N-(1-methylpropyl)-isoquinoline-3-carboxamide-(RS); PK11195; RP 52028	**1611.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

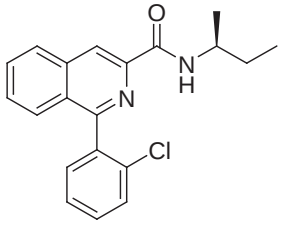
Literature:

Camsonne R. et al. Synthesis of N-[^{11}C]methyl, N-(methyl-1-propyl), (chloro-2-phenyl)-1-isoquinoline carboxamide-3 (PK11195): a new ligand for peripheral benzodiazepine receptors. J. Labelled Compd. Radiopharm. 1984, 21, 985-991.

Hashimoto K. et al. Synthesis and evaluation of ^{11}C-PK11195 for in vivo study of peripheral-type benzodiazepine receptors using positron emission tomography. Ann. Nucl. Med. 1989, 3, 63-71.

Shah F. et al. Synthesis of the Enantiomers of [N-methyl-^{11}C]PK 11195 and Comparison of their Behaviours as Radioligands for PK Binding Sites in Rats. Nucl. Med. Biol. 1994, 21, 573-581.

Cremer J.E. et al. The Distribution of Radioactivity in Brains of Rats Given [N-methyl-^{11}C]PK11195 In Vivo After Induction of a Cortical Ischaemic Lesion. Int. J. Rad. Appl. Instrum. B, 1992, 19, 159-166.

Product Number	Product	Order number / Unit
1620	**(S)-N-Desmethyl PK11195** **Precursor for (S)-[N-Methyl-^{11}C-]PK11195** $C_{20}H_{19}ClN_2O$ **Molar Mass:** 338.83 [157809-86-4] Colourless crystals packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 3-Isoquinolinecarboxamide, 1-(2-chlorophenyl)-N-(1-methylpropyl)-(S) **Synonymes:** 1-(2-Chlorophenyl)-N-(1-methylpropyl)-isoquinoline-3-carboxamide-(S)	**1620.0001: 1 mg per vial** **1620.0002: 2 mg per vial** **Please inquire for customized filling and bulk quantities.** 

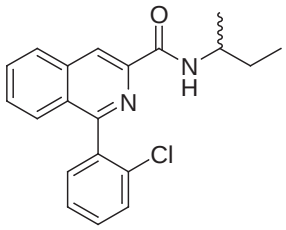
Literature:

Camsonne R. et al. Synthesis of N-[^{11}C]methyl, N-(methyl-1-propyl), (chloro-2-phenyl)-1-isoquinoline carboxamide-3 (PK11195): a new ligand for peripheral benzodiazepine receptors. J. Labelled Compd. Radiopharm. 1984, 21, 985-991.

Hashimoto K. et al. Synthesis and evaluation of ^{11}C-PK11195 for in vivo study of peripheral-type benzodiazepine receptors using positron emission tomography. Ann. Nucl. Med. 1989, 3, 63-71.

Shah F. et al. Synthesis of the Enantiomers of [N-methyl-^{11}C]PK 11195 and Comparison of their Behaviours as Radioligands for PK Binding Sites in Rats. Nucl. Med. Biol. 1994, 21, 573-581.

Cremer J.E. et al. The Distribution of Radioactivity in Brains of Rats Given [N-methyl-^{11}C]PK11195 In Vivo After Induction of a Cortical Ischaemic Lesion. Int. J. Rad. Appl. Instrum. B, 1992, 19, 159-166.

Product Number	Product	Order number / Unit
1640	**(R,S)-N-Desmethyl PK11195** **Precursor for (R,S)-[N-Methyl-^{11}C-]PK11195** $C_{20}H_{19}ClN_2O$ **Molar Mass:** 338.83 [124236-61-9] Colourless crystals packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 3-Isoquinolinecarboxamide, 1-(2-chlorophenyl)-N-(1-methylpropyl),-(R,S) **Synonymes:** 1-(2-Chlorophenyl)-N-(1-methylpropyl)-isoquinoline-3-carboxamide-(R,S)	**1640.0001: 1 mg per vial** **1640.0002: 2 mg per vial** **Please inquire for customized filling and bulk quantities.** 

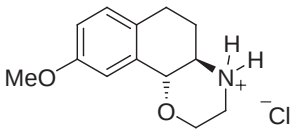
Literature:

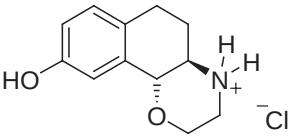
Camsonne R. et al. Synthesis of N-[^{11}C]methyl, N-(methyl-1-propyl), (chloro-2-phenyl)-1-isoquinoline carboxamide-3 (PK11195): a new ligand for peripheral benzodiazepine receptors. J. Labelled Compd. Radiopharm. 1984, 21, 985-991.

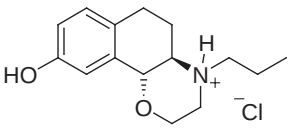
Hashimoto K. et al. Synthesis and evaluation of ^{11}C-PK11195 for in vivo study of peripheral-type benzodiazepine receptors using positron emission tomography. Ann. Nucl. Med. 1989, 3, 63-71.

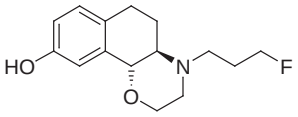
Shah F. et al. Synthesis of the Enantiomers of [N-methyl-^{11}C]PK 11195 and Comparison of their Behaviours as Radioligands for PK Binding Sites in Rats. Nucl. Med. Biol. 1994, 21, 573-581.

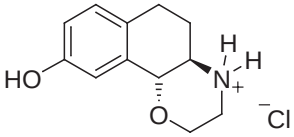
Cremer J.E. et al. The Distribution of Radioactivity in Brains of Rats Given [N-methyl-^{11}C]PK11195 In Vivo After Induction of a Cortical Ischaemic Lesion. Int. J. Rad. Appl. Instrum. B, 1992, 19, 159-166.

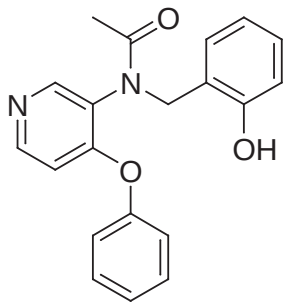
Product Number	Product	Order number / Unit
1642	**(+)-9-MeO-HNO hydrochloride** **Reference standard for [^{11}C]-(+)-PHNO** $C_{13}H_{17}NO_2 \cdot HCl$ **Molar Mass:** 255.74 [99833-85-9] Off-white solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 2H-Naphth[1,2-b]-1,4-oxazine, 3,4,4a,5,6,10b-hexahydro-9-methoxy-, hydrochloride, trans- **Synonymes:** (+)-9-Methoxy-3,4,4a,5,6,10b-hexahydro-2H-naphtho[1,2-b][1,4]oxazine hydrochloride; (+)-9-MeO-HNO hydrochloride **Literature:** Wilson A.A. et al. [^{11}C]-(+)-4-Propyl-3,4,4a,5,6,10b-hexahydro-2H-naphtho[1,2-b][1,4]oxazin-9-ol as a Potential Radiotracer for in Vivo Imaging of the Dopamine D2 High-Affinity State with Positron Emission Tomography. J. Med. Chem. 2005, 48, 4153 Boileau I. et al. Decreased binding of the D3 dopamine receptor-preferring ligand [^{11}C]-(+)-PHNO in drug-naïve Parkinson's disease. Brain, 2009, 132, 1366-1375.	**1642.0001: 1 mg per vial** **1642.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

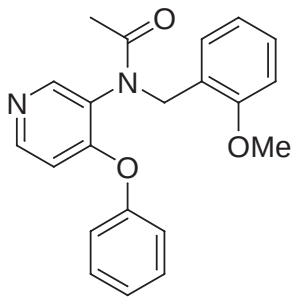
Product Number	Product	Order number / Unit
1643	**(+)-HNO hydrochloride** **Precursor for [^{11}C]-(+)-PHNO** **Precursor for [^{18}F]-(+)-F-PHNO** $C_{12}H_{15}NO_2 \cdot HCl$ **Molar Mass:** 241.71 [858517-21-2] Beige solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 2H-Naphtho[1,2-b]-1,4-oxazin-9-ol, 3,4,4a,5,6,10b-hexahydro-, hydrochloride (1:1), (4aR,10bR) **Synonymes:** (4aR,10bR)-3,4,4a,5,6,10b-hexahydro-2H-Naphth[1,2-b]-1,4-oxazin-9-ol, hydrochloride; (+)-3,4,4a,5,6,10b-Hexahydro-2H-naphtho[1,2-β][1,4]oxazin-9-ol hydrochloride; (4aR,10bR)-3,4,4a,5,6,10b-Hexahydro-2H-Naphth[1,2-β]-1,4-oxazin-9-ol, hydrochloride; (+)-HNO **Literature:** Wilson A.A. et al. [^{11}C]-(+)-4-Propyl-3,4,4a,5,6,10b-hexahydro-2H-naphtho[1,2-b][1,4]oxazin-9-ol as a Potential Radiotracer for in Vivo Imaging of the Dopamine D2 High-Affinity State with Positron Emission Tomography. J. Med. Chem. 2005, 48, 4153-4160 Boileau I. et al. Decreased binding of the D3 dopamine receptor-preferring ligand [^{11}C]-(+)-PHNO in drug-naïve Parkinson's disease. Brain, 2009, 132, 1366-1375.	**1643.0001: 1 mg per vial** **1643.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

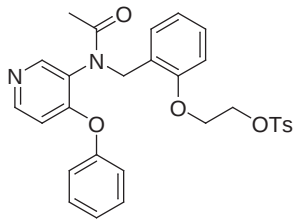
Product Number	Product	Order number / Unit
1645	**(+)-PHNO hydrochloride** **Reference standard for [^{11}C]-(+)-PHNO** $C_{15}H_{21}NO_2 \cdot HCl$ **Molar Mass:** 283.79 [99705-65-4] Off-white solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index names: 2H-Naphtho[1,2-b]-1,4-oxazin-9-ol, 3,4,4a,5,6,10b-hexahydro-4-propyl-, hydrochloride (1:1), (4aR,10bR)-; (4aR,10bR)- 2H-Naphth[1,2-b]-1,4-oxazin-9-ol, 3,4,4a,5,6,10b-hexahydro-4-propyl-, hydrochloride, (4aR-trans)- **Synonymes:** Noxazinal hydrochloride, Naxagolide hydrochloride, Nazagolide hydrochloride, Dopazinol hydrochloride, L647339, MK 458, (+)-PHNO hydrochloride, (+)-4-propyl-9-hydroxynaphthoxazine hydrochloride **Literature:** Wilson A.A. et al. [^{11}C]-(+)-4-Propyl-3,4,4a,5,6,10b-hexahydro-2H-naphtho[1,2-b][1,4]oxazin-9-ol as a Potential Radiotracer for in Vivo Imaging of the Dopamine D2 High-Affinity State with Positron Emission Tomography. J. Med. Chem. 2005, 48, 4153-4160 Boileau I. et al. Decreased binding of the D3 dopamine receptor-preferring ligand [^{11}C]-(+)-PHNO in drug-naïve Parkinson's disease. Brain, 2009, 132, 1366-1375.	**1645.0001: 1 mg per vial** **1645.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

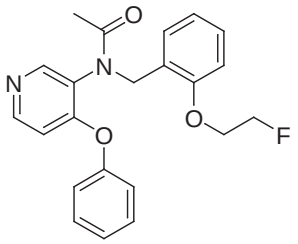
Product Number	Product	Order number / Unit
1646	**(+)-F-PHNO** **Reference standard [^{18}F]-(+)-F-PHNO** $C_{15}H_{20}FNO_2$ **Molar Mass:** 265.32 [905963-70-4] Colourless to off-white solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 2H-Naphtho[1,2-b]-1,4-oxazin-9-ol, 4-(3-fluoropropyl)-3,4,4a,5,6,10b-hexahydro-, (4aR,10bR)- **Synonymes:** 2H-Naphth[1,2-b]-1,4-oxazin-9-ol, 4-(3-fluoropropyl)-3,4,4a,5,6,10b-hexahydro-, (4aR,10bR)- **Literature:** Wilson A.A. et al. [^{11}C]-(+)-4-Propyl-3,4,4a,5,6,10b-hexahydro-2H-naphtho[1,2-b][1,4]oxazin-9-ol as a Potential Radiotracer for in Vivo Imaging of the Dopamine D2 High-Affinity State with Positron Emission Tomography. J. Med. Chem. 2005, 48, 4153-4160 Boileau I. et al. Decreased binding of the D3 dopamine receptor-preferring ligand [^{11}C]-(+)-PHNO in drug-naïve Parkinson's disease. Brain, 2009, 132, 1366-1375. Wilson et al. Syntheses and in vitro evaluation of fluorinated naphthoxazines as dopamine D2/D3 receptor agonists: radiosynthesis, ex vivo biodistribution and autoradiography of [^{18}F]F-PHNO. Nucl. Med. Biol. 2007, 34, 195-20	**1646.0001: 1 mg per vial** **1646.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

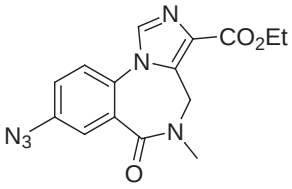
Product Number	Product	Order number / Unit
1647	**(+)-HNO hydrochloride (GMP)** **Precursor for [^{11}C]-(+)-PHNO** **Precursor for [^{18}F]-(+)-F-PHNO** Manufactured according to GMP requirements for APIs for use in clinical trials (ICH Q7 chapter 19) $C_{12}H_{15}NO_2 \cdot HCl$ **Molar Mass:** 241.71 [858517-21-2] Beige solid packaged in dark glass screw cap vials. **Purity:** $\geq$ 97 % **Certificates:** CoA with NMR and IR spectra (identity); HPLC (purity); GC (residual solvents); inorganic impurities (GF-AAS) **Chemical Name:** CA index name: 2H-Naphtho[1,2-b]-1,4-oxazin-9-ol, 3,4,4a,5,6,10b-hexahydro-, hydrochloride (1:1), (4aR,10bR) **Synonymes:** (4aR,10bR)-3,4,4a,5,6,10b-hexahydro-2H-Naphth[1,2-b]-1,4-oxazin-9-ol, hydrochloride; (+)-3,4,4a,5,6,10b-Hexahydro-2H-naphtho[1,2-β][1,4]oxazin-9-ol hydrochloride; (4aR,10bR)-3,4,4a,5,6,10b-Hexahydro-2H-Naphth[1,2-β]-1,4-oxazin-9-ol, hydrochloride; (+)-HNO **Literature:** Same as product number 1643.	**1647.0050: 50 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1652	**PBR28 precursor** **Precursor for [^{11}C]-PBR28** **([^{11}C]-N-(2-Methoxybenzyl)-N-(4-phenoxypyridin-3-yl)acetamide)** $C_{20}H_{18}N_2O_3$ **Molar Mass:** 334.37 [1005325-42-7] Colourless solid packaged in dark glass vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Acetamide, N-[(2-hydroxyphenyl)methyl]-N-(4-phenoxy-3-pyridinyl)- **Synonymes:** n/a **Literature:** Wilson A.A. et al. Radiosynthesis and initial evaluation of [^{18}F]-FEPPA for PET imaging of peripheral benzodiazepine receptors. Nucl. Med. Biol. 2008, 35, 305-314. Briard E. et al. Synthesis and Evaluation in Monkey of Two Sensitive ^{11}-Labeled Aryloxyanilide Ligands for Imaging Brain Peripheral Benzodiazepine Receptors In Vivo. J. Med. Chem. 2008, 51, 17-30 Imaizumi M. et al. PET imaging with [^{11}C]PBR28 can localize and quantify upregulated peripheral benzodiazepine receptors associated with cerebral ischemia in rat. Neurosci Lett. 2007, 411, 200-205.	**1652.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1653	**PBR28 standard** **Reference standard for [^{11}C]-PBR28 ([^{11}C]-N-(2-Methoxybenzyl)-N-(4-phenoxypyridin-3-yl)acetamide)** $C_{21}H_{20}N_2O_3$ **Molar Mass:** 348.40 [253307-72-1] Colourless to slightly yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Acetamide, N-[(2-methoxyphenyl)methyl]-N-(3-phenoxy-4-pyridinyl)- **Synonymes:** N-Acetyl-N-(2-methoxybenzyl)-2-phenoxy-5-pyridinamine; 4-[N-Acetyl-N-[2-methoxybenzyl)amino]-3-phenoxypyridine, N-(2-Methoxybenzyl)-n-(4-phenoxypyridin-3-yl) acetamide, PBR28 **Literature:** Imaizumi M. et al. PET imaging with [^{11}C]PBR28 can localize and quantify upregulated peripheral benzodiazepine receptors associated with cerebral ischemia in rat. Neurosci Lett. 2007, 411, 200-205.	**1653.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1654	**FEPPA precursor** **Precursor for [^{18}F]-FEPPA ([^{18}F]-N-(2-(2-Fluoroethoxy)benzyl)-N-(4-phenoxypyridin-3-yl)acetamide)** $C_{29}H_{28}N_2O_6S$ **Molar Mass:** 532.61 [1095267-89-2] Colourless foam or solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Acetamide, N-[[2-[2-[[(4-methylphenyl)sulfonyl]oxy]ethoxy]phenyl]methyl]-N-(4-phenoxy-3-pyridinyl)- **Synonymes:** N-Acetyl-N-(2-fluoroethoxybenzyl)-2-phenoxy-5-pyridinamine **Literature:** Wilson A.A. et al. Radiosynthesis and initial evaluation of [^{18}F]-FEPPA for PET imaging of peripheral benzodiazepine receptors. Nucl. Med. Biol. 2008, 35, 305-314.	**1654.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1655	**FEPPA standard** **Reference standard for [^{18}F]-FEPPA ([^{18}F]-N-(2-(2-Fluoroethoxy)benzyl)-N-(4-phenoxypyridin-3-yl)acetamide)** $C_{22}H_{21}FN_2O_3$ **Molar Mass:** 380.41 [1095267-90-5] Colourless to off-white solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: Acetamide, N-[[2-(2-fluoroethoxy)phenyl]methyl]-N-(4-phenoxy-3-pyridinyl)- **Synonymes:** N-Acetyl-N-(2-fluoroethoxybenzyl)-2-phenoxy-5-pyridinamine **Literature:** Wilson A.A. et al. Radiosynthesis and initial evaluation of [^{18}F]-FEPPA for PET imaging of peripheral benzodiazepine receptors. Nucl. Med. Biol. 2008, 35, 305-314.	**1655.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

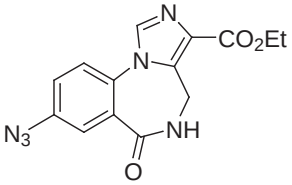
Product Number	Product	Order number / Unit
1680	**Azidomazenil** **Reference standard for [^{11}C]Ro15-4513** $C_{15}H_{14}N_6O_3$ **Molar Mass:** 326.31 [91917-65-6] Off-white solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 4H-Imidazo[1,5-a][1,4]benzodiazepine-3-carboxylic acid, 8-azido-5,6-dihydro-6-oxo-, ethyl ester **Synonymes:** 8-Azido-5,6-dihydro-6-oxo-4H-imidazo[1,5-a][1,4]benzodiazepine-3-carboxylic acid ethyl ester; Ro 15-4513	**1680.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Halldin C. et al. [^{11}C]Ro 15-4513, a ligand for visualization of benzodiazepine receptor binding. Preparation, autoradiography and positron emission tomography. Psychopharmacology 1992, 108, 16-22.

Suhara T. et al. Visualization of α_5 subunit of GABAA/benzodiazepine receptor by [^{11}C]Ro15-4513 using positron emission tomography. Synapse 2003, 47, 200-208.

Suzuki K. et al. Automated synthesis of the ultra high specific activity of [^{11}C]Ro15-4513 and its application in an extremely low concentration region to an ARG study. Nucl. Med. Biol. 2003, 30, 335-343.

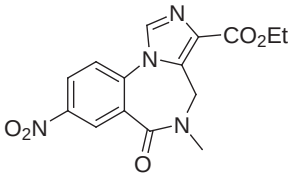
Product Number	Product	Order number / Unit
1681	**Desmethylazidomazenil** **Precursor for [^{11}C]Ro15-4513** $C_{14}H_{12}N_6O_3$ **Molar Mass:** 312.28 [143188-51-6] Colourless to yellowish solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** 4H-Imidazo[1,5-a][1,4]benzodiazepine-3-carboxylic acid, 8-azido-5,6-dihydro-6-oxo-, ethyl ester **Synonymes:** Ro 44-3902	**1681.0002: 2 mg per vial** **1681.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

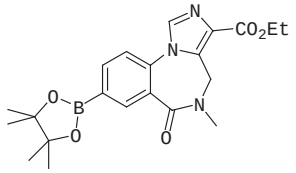
Literature:

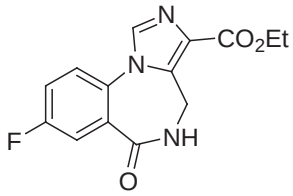
Halldin C. et al. [^{11}C]Ro 15-4513, a ligand for visualization of benzodiazepine receptor binding. Preparation, autoradiography and positron emission tomography. Psychopharmacology 1992, 108, 16-22.

Suhara T. et al. Visualization of α_5 subunit of GABAA/benzodiazepine receptor by [^{11}C]Ro15-4513 using positron emission tomography. Synapse 2003, 47, 200-208.

Suzuki K. et al. Automated synthesis of the ultra high specific activity of [^{11}C]Ro15-4513 and its application in an extremely low concentration region to an ARG study. Nucl. Med. Biol. 2003, 30, 335-343.

Product Number	Product	Order number / Unit
1690	**Nitromazenil** **Precursor for [^{18}F]Flumazenil** $C_{15}H_{14}N_4O_5$ **Molar Mass:** 330.3 [84377-97-9] Yellow solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 4H-Imidazo[1,5-a][1,4]benzodiazepine-3-carboxylic acid, 5,6-dihydro-5-methyl-8-nitro-6-oxo-, ethyl ester **Synonymes:** 5,6-Dihydro-5-methyl-8-nitro-6-oxo-4H-imidazo[1,5-a][1,4]-benzodiazepine-3-carboxylic acid ethyl ester; Ro 15-2344 **Literature:** Ryzhikov N.N. et al. Preparation of highly specific radioactivity [^{18}F]flumazenil and its evaluation in cynomolgus monkey by positron emission tomography. Nucl. Med. Biol. 2005, 32, 109-116. Broggini G. et al. A new synthesis of flumazenil suitable for fluorine-18 labeling. Org. Prep. Proced. Int. 2003, 35, 609-613.	**1690.0001: 1 mg per vial** **Please inquire for customized filling and bulk quantities.** 

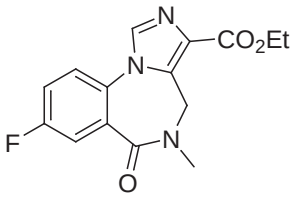
Product Number	Product	Order number / Unit
1691	**Mazenil pinacol boronate** **Precursor for [^{18}F]Flumazenil** $C_{21}H_{26}BN_3O_5$ **Molar Mass:** 411.26 CAS-RN not yet assigned Colourless to yellowish solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** 5-Methyl-6-oxo-8-(4,4,5,5-tetramethyl-[1,3,2]dioxaborolan-2-yl)-5,6-dihydro-4H-2,5,10b-triaza-benzo[e]azulene-3-carboxylic acid ethyl ester **Synonymes:** [^{18}F]Flumazenil pinacol boronate precursor; [^{18}F]Flumazenil Bpin precursor **Literature:** Preshlock S. Enhanced Copper-Mediated ^{18}F-Fluorination of Aryl Boronic Esters provides Eight Radiotracers for PET Applications. Chem. Commun. 2016, 52, 8361-8364.	**1691.0020: 20 mg per vial** **Please inquire for customized filling and bulk quantities.** 

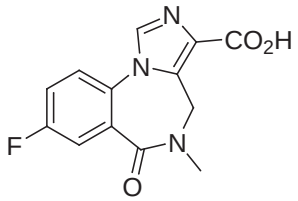
Product Number	Product	Order number / Unit
1700	**Desmethylflumazenil** **Precursor for [^{11}C]Flumazenil** **Precursor for 5-(2´-[^{18}F]fluoroethyl)Flumazenil ([^{18}F]FEF)** $C_{14}H_{12}FN_3O_3$ **Molar Mass:** 289.26 [79089-72-8] Colourless crystals packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 4H-Imidazo[1,5-a][1,4]benzodiazepine-3-carboxylic acid, 8-fluoro-5,6-dihydro-6-oxo-, ethyl ester **Synonymes:** 8-Fluoro-5,6-dihydro-6-oxo-4H-imidazo[1,5-a][1,4]benzodiazepine-3-carboxylic acid ethyl ester; Desmethyl-FMZ; Ro 15-5528	**1700.0001: 1 mg per vial** **1700.0002: 2 mg per vial** **Please inquire for customized filling and bulk quantities.** 

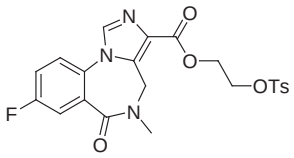
Literature:

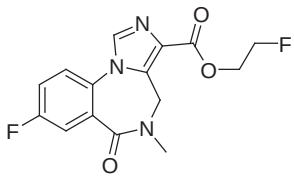
Nagren K. et al. Methylation of amide and thiol functions with [^{11}C]methyl triflate, as exemplified by [^{11}C]NMSP, [^{11}C]flumazenil and [^{11}C]methionine. J. Labelled Compd. Radiopharm. 1998, 41, 831-841.

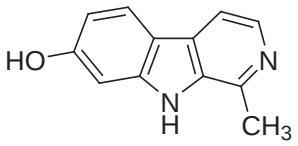
Maziere M. et al. Synthesis of Ethyl 8-Fluoro-5,6-dihydro-5-[^{11}C]methyl-6-oxo-4H-imidazo[1,5-a][1,4]benzodiazepine-3-carboxylate (RO 15.1788-^{11}C): A Specific Radioligand for the In Vivo Study of Central Benzodiazepine Receptors by Positron Emmission Tomography. Int. J. Appl. Radiat. Isot. 1984, 35, 973-976.

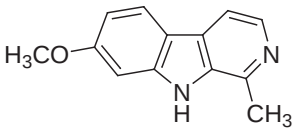
Product Number	Product	Order number / Unit
1710	**Flumazenil** **Reference standard for [^{11}C]Flumazenil** **Reference standard for [^{18}F]Flumazenil** $C_{15}H_{14}FN_3O_3$ **Molar Mass:** 303.29 [78755-81-4] Colourless crystals packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 4H-Imidazo[1,5-a][1,4]benzodiazepine-3-carboxylic acid, 8-fluoro-5,6-dihydro-5-methyl-6-oxo-, ethyl ester **Synonymes:** 8-Fluoro-5,6-dihydro-5-methyl-6-oxo-4H-Imidazo[1,5-a][1,4]benzodiazepine-3-carboxylic acid ethyl ester; Anexate; Flumazenil; Flumazepil; Flumenazil; Lanexat; Mazicon; FMZ; Ro 15-1788 **Literature:** Nagren K. et al. Methylation of amide and thiol functions with [^{11}C]methyl triflate, as exemplified by [^{11}C]NMSP, [^{11}C]flumazenil and [^{11}C]methionine. J. Labelled Compd. Radiopharm. 1998, 41, 831-841. Suzuki K. et al. Computer-Controlled Large Scale Production of High Specific Activity [^{11}C]Ro 15-1788 for PET Studies of Benzodiazepine Receptors. Int. J. Appl. Radiat. Isot. 1985, 36, 971-976. Maziere M. et al. Synthesis of Ethyl-8-fluoro-5,6-dihydro-5-[^{11}C]methyl-6-oxo-4H-imidazo[1,5-a][1,4]benzodiazepine-3-carboxylate (RO 15.1788-^{11}C): A Specific Radioligand for the In Vivo Study of Central Benzodiazepine Receptors by Positron Emission Tomography. Int. J. Appl. Radiat. Isot. 1984, 35, 937-976.	**1710.0010: 10 mg per vial** **1710.0020: 20 mg per vial** **1710.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

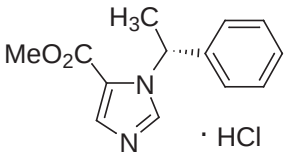
Product Number	Product	Order number / Unit
1720	**Flumazenil acid** **Precursor for [^{18}F]FFMZ** **(2´-[^{18}F]Fluorethylflumazenil)** $C_{13}H_{10}FN_3O_3$ **Molar Mass:** 275.24 [84378-44-9] Colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 4H-Imidazo[1,5-a][1,4]benzodiazepine-3-carboxylic acid, 8-fluoro-5,6-dihydro-5-methyl-6-oxo- **Synonymes:** O-Desethylflumazenil; 3-Desethyl-FMZ; Ro 15-3890 **Literature:** Wadsak W. et al. Radiosynthesis of 3-[2[^{18}F]fluoro-)flumazenil ([^{18}F]-FFMZ). J. Labelled Compd. Radiopharm. 2003, 46, 1229-1240. Yoon Y.H. et al. Novel one-pot one-step synthesis of 2´-[^{18}F]fluoroflumazenil (FFMZ) for benzodiazepine receptor imaging. Nucl. Med. Biol. 2003, 30, 521-527. Mitterhauser M. et al. Biological evaluation of 2´-[^{18}F]fluoroflumazenil ([^{18}F]FFMZ), a potential GABA receptor ligand for PET. Nucl. Med. Biol. 2004, 31, 291-295 Young S.C. et al. Biological properties of 2´-[^{18}F]fluoroflumazenil for central benzodiazepine receptor imaging. Nucl. Med. Biol. 2005, 32, 263-268.	**1720.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

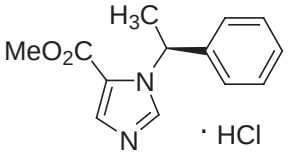
Product Number	Product	Order number / Unit
1721	**Tosyloxyethylflumazenil** **Precursor for [^{18}F]FFMZ (2´-[^{18}F]Fluorethylflumazenil)** $C_{22}H_{20}FN_3O_6S$ **Molar Mass:** 473.47 [676437-17-5] Colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 4H-Imidazo[1,5-a][1,4]benzodiazepine-3-carboxylic acid, 8-fluoro-5,6-dihydro-5-methyl-6-oxo-, 2-[[(4-methylphenyl)sulfonyl]oxy]ethyl ester **Synonymes:** TFMZ; 8-Fluoro-5-methyl-6-oxo-5,6-dihydro-4H-2,5,10b-triaza-benzo[e]azulene-3-carboxylic acid 2-(toluene-4-sulfonyloxy)-ethyl ester; 2´-Tosyloxyflumazenil **Literature:** Yoon Y.H. et al. Novel one-pot one-step synthesis of 2´-[^{18}F]fluoroflumazenil (FFMZ) for benzodiazepine receptor imaging. Nucl. Med. Biol. 2003, 30, 521-527.	**1721.0005: 5 mg per vial** **1721.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

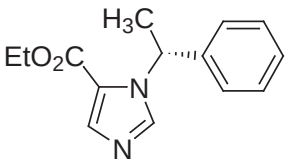
Product Number	Product	Order number / Unit
1730	**Fluoroethylflumazenil** **Reference standard for [^{18}F]FFMZ (2´-[^{18}F]Fluorethylflumazenil)** $C_{15}H_{13}F_2N_3O_3$ **Molar Mass:** 321.28 [676437-19-7] ([^{18}F]FFMZ) Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** 4H-Imidazo[1,5-a][1,4]benzodiazepine-3-carboxylic acid, 8-fluoro-5,6-dihydro-5-methyl-6-oxo-, (2-fluoroethyl) ester **Synonymes:** 3´-(2-Fluoroethyl)flumazenil; 2´-Fluorflumazenil; FFMZ **Literature:** Wadsak W. et al. Radiosynthesis of 3-[2[^{18}F]fluoro-)flumazenil ([^{18}F]-FFMZ). J. Labelled Compd. Radiopharm. 2003, 46, 1229-1240. Yoon Y.H. et al. Novel one-pot one-step synthesis of 2´-[^{18}F]fluoroflumazenil (FFMZ) for benzodiazepine receptor imaging. Nucl. Med. Biol. 2003, 30, 521-527. Mitterhauser M. et al. Biological evaluation of 2´-[^{18}F]fluoroflumazenil ([^{18}F]FFMZ), a potential GABA receptor ligand for PET. Nucl. Med. Biol. 2004, 31, 291-295 Young S.C. et al. Biological properties of 2´-[^{18}F]fluoroflumazenil for central benzodiazepine receptor imaging. Nucl. Med. Biol. 2005, 32, 263-268.	**1730.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

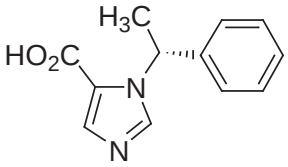
Product Number	Product	Order number / Unit
1753	**Harmol** **Precursor for [^{11}C]-Harmine** $C_{12}H_{10}N_2O$ **Molar Mass:** 198.22 [487-03-6] Colourless to slightly greenish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 9H-Pyrido[3,4-b]indol-7-ol, 1-methyl- **Synonymes:** Methyl-9H-β-carbolin-7-ol; β-Carboline, 7-hydroxy-1-methyl-; 7-Hydrox-1-methyl-9H-pyrido[3,4-b]indole; 1-Methyl-9H-pyrido[3,4-b]indol-7-ol; Harmol; Methylpyridoindolol; 1-Methyl-β-carboline-7-ol **Literature:** Bergström M. et al. Synthesis of some ^{11}C-labelled MAO-A inhibitors and their in vivo uptake kinetics in rhesus monkey brain. Nucl. Med. Biol. 1997, 24, 381-388.	**1753.0001: 1 mg per vial** **1753.0010: 10 mg per vial** **1753.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

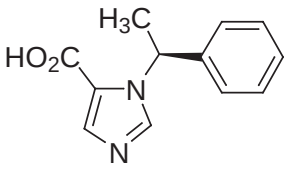
Product Number	Product	Order number / Unit
1755	**Harmine** **Reference standard for [^{11}C]-Harmine** $C_{13}H_{12}N_2O$ **Molar Mass:** 212.25 [442-51-3] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 9H-Pyrido[3,4-b]indole, 7-methoxy-1-methyl- **Synonymes:** 1-Methyl-7-methoxy-β-carboline; 7-Methoxy-1-methyl-9H-pyrido[3,4-b]indole; Banisterin; Banisterine; Harmin; Harmine; Leucoharmine; Telepathin; Telepathine; Yagein; Yageine **Literature:** Bergström M. et al. Synthesis of some ^{11}C-labelled MAO-A inhibitors and their in vivo uptake kinetics in rhesus monkey brain. Nucl. Med. Biol. 1997, 24, 381-388.	**1755.0001: 1 mg per vial** **1755.0010: 10 mg per vial** **1755.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

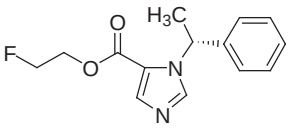
Product Number	Product	Order number / Unit
1760	**(R)-Metomidate hydrochloride** **Reference standard for [^{11}C]Metomidate** $C_{13}H_{14}N_2O_2 \cdot HCl$ **Molar Mass:** 266.72 [66392-64-1] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 1H-Imidazole-5-carboxylic acid, 1-[(1R)-1-phenylethyl]-, methyl ester hydrochloride **Synonymes:** (+)-Metomidate hydrochloride; Imidazole-5-carboxylic acid, 1-(α-methylbenzyl)-, methyl ester, (R)-(+) hydrochloride **Literature:** Bergström M. et al. In Vitro and In Vivo Primate Evaluation of Carbon-11-Etomidate and Carbon-11-Metomidate as Potential Tracers for PET Imaging of the Adrenal Cortex and Its Tumors. J. Nucl. Med. 1998, 39, 982-989. Heikki M. et al. Imaging of Adrenal Incidentalomas with PET using ^{11}C-Metomidate and ^{18}F-FDG. J. Nucl. Med. 2004, 45, 972-979.	**1760.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

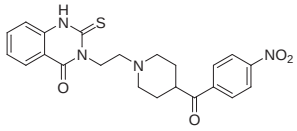
Product Number	Product	Order number / Unit
1762	**(S)-Metomidate hydrochloride** **Reference standard for [^{11}C]Metomidate** $C_{13}H_{14}N_2O_2 \cdot HCl$ **Molar Mass:** 266.72 [66392-65-2] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index names: 1H-Imidazole-5-carboxylic acid, 1-[(1S)-1-phenylethyl]-, methyl ester hydrochloride; 1H-Imidazole-5-carboxylic acid, 1-(1-phenylethyl)-, methyl ester, monohydrochloride, (S)- **Synonymes:** (-)-Metomidate hydrochloride; Imidazole-5-carboxylic acid, 1-(α-methylbenzyl)-, methyl ester, (S)-(-) hydrochloride **Literature:** Bergström M. et al. In Vitro and In Vivo Primate Evaluation of Carbon-11-Etomidate and Carbon-11-Metomidate as Potential Tracers for PET Imaging of the Adrenal Cortex and Its Tumors. J. Nucl. Med. 1998, 39, 982-989. Heikki M. et al. Imaging of Adrenal Incidentalomas with PET using ^{11}C-Metomidate and ^{18}F-FDG. J. Nucl. Med. 2004, 45, 972-979.	**1762.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

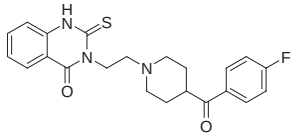
Product Number	Product	Order number / Unit
1770	**(R)-Etomidate** **Reference standard for [^{11}C]Etomidate** $C_{14}H_{16}N_2O_2$ **Molar Mass:** 244.29 [33125-97-2] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 1H-Imidazole-5-carboxylic acid, 1-[(1R)-1-phenylethyl]-, ethyl ester **Synonymes:** 1H-Imidazole-5-carboxylic acid, 1-(1-phenylethyl)-, ethyl ester, (R)-; Imidazole-5-carboxylic acid, 1-(α-methylbenzyl)-, ethyl ester, (R)-(+)-; (+)-Etomidate; Amidate; D-Etomidate; Hypnomidate; Propiscin; R 16659; Radenarcon **Literature:** Bergström M. et al. In Vitro and In Vivo Primate Evaluation of Carbon-11-Etomidate and Carbon-11-Metomidate as Potential Tracers for PET Imaging of the Adrenal Cortex and Its Tumors. J. Nucl. Med. 1998, 39, 982-989.	**1770.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

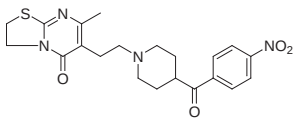
Product Number	Product	Order number / Unit
1780	**(R)-Desethyl-Etomidate** **Precursor for [^{11}C]Metomidate, [^{11}C]Etomidate, and (R)-[^{18}F]FETO** **(R)-[^{18}F]Fluoroethyletomidate** $C_{12}H_{12}N_2O_2$ **Molar Mass:** 216.24 [56649-48-0] Off-white solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 1H-Imidazole-5-carboxylic acid, 1-[(1R)-1-phenylethyl]- **Synonymes:** (R)-(+)-1-(1-Phenylethyl)-1H-imidazole-5-carboxylic acid; 1H-Imidazole-5-carboxylic acid, 1-(1-phenylethyl)-, (R)-; 1H-Imidazole-5-carboxylic acid, 1-[(1R)-1-phenylethyl]-; R28141 **Literature:** Bergström M. et al. In Vitro and In Vivo Primate Evaluation of Carbon-11-Etomidate and Carbon-11-Metomidate as Potential Tracers for PET Imaging of the Adrenal Cortex and Its Tumors. J. Nucl. Med. 1998, 39, 982-989. Wadsak W. et al. Synthesis of [^{18}F]FETO, a novel potential 11-beta hydroxylase inhibitor. J. Labelled Compd. Radiopharm. 2003, 46, 379-388. Mitterhauser M. et al. In vivo and in vitro evaluation of [^{18}F]FETO with respect to the adrenocortical and GABAergic system in rats. Eur. J. Nucl. Med. Mol. Imaging 2003, 30, 1398-1401.	**1780.0003: 3 mg per vial** **Please inquire for customized filling and bulk quantities.** 

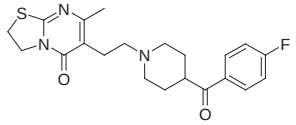
Product Number	Product	Order number / Unit
1782	**(S)-Desethyl-Etomidate** **Precursor for [^{11}C]Metomidate and [^{11}C]Etomidate and (S)-[^{18}F]FETO ((S)-[^{18}F]Fluoroethyletomidate)** $C_{12}H_{12}N_2O_2$ **Molar Mass:** 216.24 [56649-49-1] Off-white solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index names: 1H-Imidazole-5-carboxylic acid, 1-[(1S)-1-phenylethyl]-; 1H-Imidazole-5-carboxylic acid, 1-(1-phenylethyl)-, (S)- **Synonymes:** (S)-(-)-1-(1-Phenylethyl)-1H-imidazole-5-carboxylic acid; 1H-Imidazole-5-carboxylic acid, 1-(1-phenylethyl)-, (S)-; 1H-Imidazole-5-carboxylic acid, 1-[(1S)-1-phenylethyl]- **Literature:** Bergström M. et al. In Vitro and In Vivo Primate Evaluation of Carbon-11-Etomidate and Carbon-11-Metomidate as Potential Tracers for PET Imaging of the Adrenal Cortex and Its Tumors. J. Nucl. Med. 1998, 39, 982-989. Wadsak W. et al. Synthesis of [^{18}F]FETO, a novel potential 11-beta hydroxylase inhibitor. J. Labelled Compd. Radiopharm. 2003, 46, 379-388. Mitterhauser M. et al. In vivo and in vitro evaluation of [^{18}F]FETO with respect to the adrenocortical and GABAergic system in rats. Eur. J. Nucl. Med. Mol. Imaging 2003, 30, 1398-1401.	**1782.0003: 3 mg per vial** **Please inquire for customized filling and bulk quantities.** 

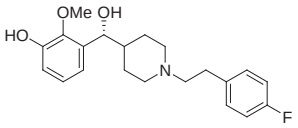
Product Number	Product	Order number / Unit
1790	**(R)-Fluoroethyl-Etomidate** **Reference standard for (R)-[^{18}F]FETO (R)-[^{18}F]Fluoroethyletomidate** $C_{14}H_{15}FN_2O_2$ **Molar Mass:** 262.28 [960403-07-0] Yellowish oil packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 1H-Imidazole-5-carboxylic acid, 1-[(1R)-1-phenylethyl]-, 2-fluoroethyl ester **Synonymes:** (R)-1-(1-Phenylethyl)-1H-imidazole-5-carboxylic acid, 2-fluoro ethyl ester; FETO **Literature:** Mitterhauser M. et al. In vivo and in vitro evaluation of [^{18}F]FETO with respect to the adrenocortical and GABAergic system in rats. Eur. J. Nucl.Med. Mol. Imaging 2003, 30, 1398-1401. Ettlinger D.E. et al. [^{18}F]FETO: metabolic considerations. Eur. J. Nucl.Med. Mol. Imaging 2006, 33, 928-931.	**1790.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

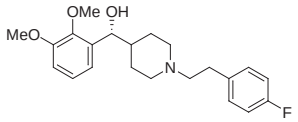
Product Number	Product	Order number / Unit
1800	**Nitro-Altanserin** **Precursor for [^{18}F]Fluoro-Altanserin** $C_{22}H_{22}N_4O_4S$ **Molar Mass:** 438.5 [139418-53-4] Yellowish solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 4(1H)-Quinazolinone, 3-(2-(4-(4-nitrobenzoyl)-1-piperidinyl)ethyl)-2,3-dihydro-2-thioxo- **Synonymes:** n/a **Literature:** Lemaire C. et al. Fluorine-18-Altanserin : A Radioligand for the Study of Serotonin Receptors with PET : radiolabeling and In Vivo Biologic Behavior in Rats. J. Nucl. Med. 1991, 32, 2266-2272. Tan P.-Z. et al. Characterization of Radioactive Metabolites of 5-HT2A Receptor PET Ligand [^{18}F]Altanserin in Human and Rodent. Nucl. Med. Biol. 1999, 26, 601-608. Tan P.-Z. et al. Rapid Synthesis of F-18 and H-2 Dual-labeled Altanserin. A Metabolically Resistant PET Ligand for 5-HT1A Receptors. J. Labelled Compd. Radiopharm. 1999, 42, 457-467.	**1800.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

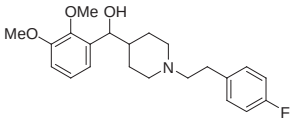
Product Number	Product	Order number / Unit
1810	**Altanserin** **Reference standard for [^{18}F]Fluoro-Altanserin** $C_{22}H_{22}FN_3O_2S$ **Molar Mass:** 411.49 [76330-71-7] Yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 4(1H)-Quinazolinone, 3-(2-(4-(4-fluorobenzoyl)-1-piperidinyl)ethyl)-2,3-dihydro-2-thioxo- **Synonymes:** n/a **Literature:** Lemaire C. et al. Fluorine-18-Altanserin : A Radioligand for the Study of Serotonin Receptors with PET : radiolabeling and In Vivo Biologic Behavior in Rats. J. Nucl. Med. 1991, 32, 2266-2272. Tan P.-Z. et al. Characterization of Radioactive Metabolites of 5-HT2A Receptor PET Ligand [^{18}F]Altanserin in Human and Rodent. Nucl. Med. Biol. 1999, 26, 601-608. Tan P.-Z. et al. Rapid Synthesis of F-18 and H-2 Dual-labeled Altanserin. A Metabolically Resistant PET Ligand for 5-HT1A Receptors. J. Labelled Compd. Radiopharm. 1999, 42, 457-467.	**1810.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

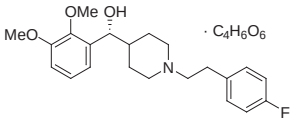
Product Number	Product	Order number / Unit
1820	**Nitro-Setoperone** **Precursor for [^{18}F]Fluoro-Setoperone** $C_{21}H_{24}N_4O_4S$ **Molar Mass:** 428.50 [113981-16-1] Yellowish solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 5H-Thiazolo[3,2-a]pyrimidin-5-one, 2,3-dihydro-7-methyl-6-[2-[4-(4-nitrobenzoyl)-1-piperidinyl]ethyl]- **Synonymes:** 6-[2-[4-(4-nitrobenzoyl)-1-piperidinyl]ethyl]-2,3-dihydro-7-methyl-5H-thiazolo[3,2-a]pyrimidin-5-one **Literature:** Blin J. et al. Blood-cerebrospinal fluid and blood-brain barriers imaged by ^{18}F-Labeled metabolites of ^{18}F-Setoperone studied in humans using positron emission tomography. J. Neurochem. 1992, 58, 2303-2310. Blin J. et al. [^{18}F]Setoperone: a new high-affinity ligand for positron emission tomography study of the serotonin-2 receptors in baboon brain in vivo. Eur. J. Pharm. 1988, 147, 73-82. Crouzel C. et al. Labeling of a serotoninergic ligand with ^{18}F: [^{18}F]setoperone. J. Labelled Compd. Radiopharm. 1988, 25, 403-414.	**1820.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

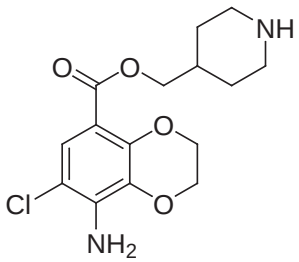
Product Number	Product	Order number / Unit
1830	**Setoperone** **Reference standard for [^{18}F]Fluoro-Setoperone** $C_{21}H_{24}FN_3O_2S$ **Molar Mass:** 401.50 [86487-64-1] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 5H-Thiazolo[3,2a]pyrimidin-5-one, 6-[2-[4-(4-fluorobenzoyl)-1-piperidinyl]ethyl]-2,3-dihydro-7-methyl- **Synonymes:** R 52245 **Literature:** Blin J. et al. [^{18}F]Setoperone : a new high-affinity ligand for positron emission tomography study of the serotonin-2 receptors in baboon brain in vivo. Eur. J. Pharm. 1988, 147, 73-82. Blin J. et al. Blood-cerebrospinal fluid and blood-brain barriers imaged by ^{18}F-Labeled metabolites of ^{18}F-Setoperone studied in humans using positron emission tomography. J. Neurochem. 1992, 58, 2303-2310. Crouzel C. et al. Labeling of a serotoninergic ligand with ^{18}F: [^{18}F]setoperone. J. Labelled Compd. Radiopharm. 1988, 25, 403-414.	**1830.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

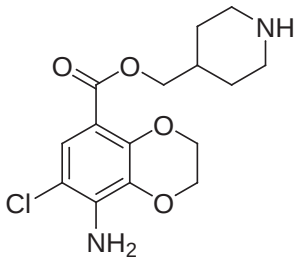
Product Number	Product	Order number / Unit
1840	**MDL105725** **Precursor for [^{11}C]MDL100907** $C_{21}H_{26}FNO_3$ **Molar Mass:** 359.43 [189192-18-5] Colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra; optical rotation **Chemical Name:** CA index name: 4-Piperidinemethanol, 1-[2-(4-fluorophenyl)ethyl]-α-(3-hydroxy-2-methoxyphenyl)-, (R) **Synonymes:** (R)-(+)-α-(3-Hydroxy-2-methoxyphenyl)-1-[2-(4-fluoro-phenyl)ethyl]-4-piperidine methanol; Desmethyl-MDL100907 **Literature:** Ullrich T. et al. A practical synthesis of the serotonin 5-HT2a receptor antagonist MDL100907, its enantiomers and their 3-phenolic derivatives as precursors for [^{11}C]labelled PET ligands. Bioorg. Med. Chem. 2000, 8, 2427-2432. Huang Y. et al. An efficient synthesis of the precursors of [^{11}C] MDL100907 labeled in two specific positions. J. Labelled Compd. Radiopharm. 1999, 42, 949-957.	**1840.0001: 1 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1850	**MDL100907** **Reference standard for [^{11}C]MDL100907** $C_{22}H_{28}FNO_3$ **Molar Mass:** 373.46 [139290-65-6] Colourless oil or solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra; optical rotation **Chemical Name:** CA index name: 4-Piperidinemethanol, 1-[2-(4-fluorophenyl)ethyl]-α-(2,3-dimethoxyphenyl)-, (R) **Synonymes:** (R)-(+)-α-(2,3-Dimethoxyphenyl)-1-[2-(4-fluoro-phenyl)ethyl]-4-piperidine-methanol **Literature:** Ullrich T. et al. A practical synthesis of the serotonin 5-HT2a receptor antagonist MDL100907, its enantiomers and their 3-phenolic derivatives as precursors for [^{11}C]labelled PET ligands. Bioorg. Med. Chem. 2000, 8, 2427-2432. Huang Y. et al. An efficient synthesis of the precursors of [^{11}C] MDL100907 labeled in two specific positions. J. Labelled Compd. Radiopharm. 1999, 42, 949-957.	**1850.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1860	**MDL100151** **Reference standard for rac-[^{11}C]MDL100907** $C_{22}H_{28}FNO_3$ **Molar Mass:** 373.46 [139290-69-0] Colourless to yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 4-Piperidinemethanol, α-(2,3-dimethoxyphenyl)-1-[2-(4-fluorophenyl)ethyl]- **Synonymes:** ($\pm$)-α-(2,3-Dimethoxyphenyl)-1-[2-(4-fluorophenyl)ethyl]-4-piperidine-methanol; rac-MDL100907 **Literature:** Sanchez C. et al. In-vivo assessment of 5-HT2A and 5-HT2C antagonistic properties of newer antipsychotics. Behavioural Pharmacology 2000, 11, 291-98.	**1860.0001: 1 mg per vial** **1860.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1870	**MDL100907 tartrate salt** **Reference standard for [^{11}C]MDL100907** $C_{22}H_{28}FNO_3 \cdot C_4H_6O_6$ **Molar Mass:** 523.55 [139290-65-6] (free base) Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H, ^{13}C and ^{19}F NMR spectra; optical rotation **Chemical Name:** 4-Piperidinemethanol, 1-[2-(4-fluorophenyl)ethyl]-α-(2,3-dimethoxyphenyl)-, (R), (R,R)-tartrate **Synonymes:** (R)-(+)-α-(2,3-Dimethoxyphenyl)-1-[2-(4-fluoro-phenyl)ethyl]-4-piperidine methanol (R,R)-tartrate; MDL100907-L-tartrate **Literature:** Ullrich T. et al. A practical synthesis of the serotonin 5-HT2a receptor antagonist MDL100907, its enantiomers and their 3-phenolic derivatives as precursors for [^{11}C]labelled PET ligands. Bioorg. Med. Chem. 2000, 8, 2427-2432. Huang Y. et al. An efficient synthesis of the precursors of [^{11}C] MDL100907 labeled in two specific positions. J. Labelled Compd. Radiopharm. 1999, 42, 949-957.	**1870.0001: 1 mg per vial** **1870.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1880	**SB206453** **Precursor for [^{11}C]SB207145** $C_{15}H_{19}ClN_2O_4$ **Molar Mass:** 326.78 [148702-73-2] Colourless to yellowish solid packaged in dark glass vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 1,4-Benzodioxin-5-carboxylic acid, 8-amino-7-chloro-2,3-dihydro-, 4-piperidinylmethyl ester **Synonymes:** 8-Amino-7-chloro-2,3-dihydro-benzo[1,4]dioxine-5-carboxylic acid piperidin-4-ylmethyl ester; 8-Amino-7-chloro-(4-piperidylmethyl)-1,4-benzodioxan-5-carboxylate; [^{11}C]SB207145 precursor **Literature:** Gee A.D. et al. Synthesis and evaluation of [^{11}C]SB207145 as the first in vivo serotonin 5-HT4 receptor radioligand for PET imaging in man. Curr. Radiopharm. 2008, 1, 110-114. Marner L. et al. Kinetic modeling of ^{11}C-SB207145 binding to 5-HT4 receptors in the human brain in vivo. J. Nucl. Med. 2009, 50, 900-908.	**1880.0010: 10 mg per vial** **1880.0050: 50 mg per vial** **Please inquire for customized filling and bulk quantities.** 

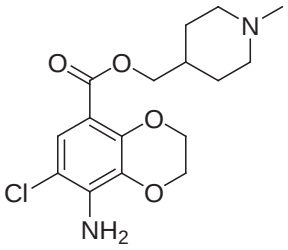
Product Number	Product	Order number / Unit
1881	**SB206453 (GMP)** **Precursor for [^{11}C]SB207145** Manufactured according to GMP requirements for APIs for use in clinical trials (ICH Q7 chapter 19) $C_{15}H_{19}ClN_2O_4$ **Molar Mass:** 326.78 [148702-73-2] Colourless to yellowish solid packaged in dark glass screw cap vials. **Purity:** > 97 % **Certificates:** CoA with NMR and IR spectra; melting point (identity); HPLC (purity); GC (residual solvents), microbiology test **Chemical Name:** CA index name: 1,4-Benzodioxin-5-carboxylic acid, 8-amino-7-chloro-2,3-dihydro-, 4-piperidinylmethyl ester **Synonymes:** 8-Amino-7-chloro-2,3-dihydro-benzo[1,4]dioxine-5-carboxylic acid piperidin-4-ylmethyl ester; 8-Amino-7-chloro-(4-piperidylmethyl)-1,4-benzodioxan-5-carboxylate; [^{11}C]SB207145 precursor **Literature:** Same as product number 1880.	**1881.0050: 50 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1882	**SB207145** **Reference standard for [^{11}C]SB207145**	**1882.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_{16}H_{21}ClN_2O_4$ **Molar Mass:** 340.80

[148702-79-8]

Colourless to off-white solid packaged in dark glass screw cap vials.



Purity: > 95 %

Certificates:
CoA; ^{1}H NMR spectrum

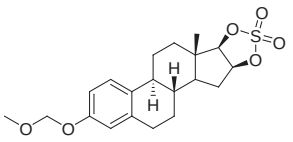
Chemical Name:
CA index name:1,4-Benzodioxin-5-carboxylic acid,
8-amino-7-chloro-2,3-dihydro-, (1-methyl-4-piperidinyl)methyl ester

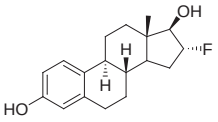
Synonymes:
8-Amino-7-chloro-2,3-dihydro-benzo[1,4]dioxine-5-carboxylic acid
1-methyl-piperidin-4-ylmethyl ester;
8-Amino-7-chloro-5-(1-methyl-4-piperidinylmethyl)-1,4-benzodioxan
carboxylate

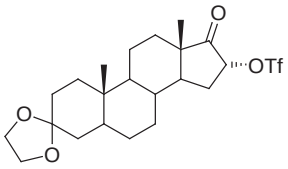
Literature:

Gee A.D. et al. Synthesis and evaluation of [^{11}C]SB207145 as the first in vivo serotonin 5-HT4 receptor radioligand for PET imaging in man. Curr. Radiopharm. 2008, 1, 110-114.

Marner L. et al. Kinetic modeling of ^{11}C-SB207145 binding to 5-HT4 receptors in the human brain in vivo. J. Nucl. Med. 2009, 50, 900-908.

Product Number	Product	Order number / Unit
1900	**MMSE** **Precursor for 16α-[^{18}F]Fluoroestradiol** $C_{20}H_{26}O_6S$ **Molar Mass:** 394.48 [177714-21-5] Nearly colourless crystals packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Estra-1,3,5(10)-triene-16,17-diol, 3-(methoxymethoxy)-, cyclic sulfate, (16beta,17beta) **Synonymes:** 3-(Methoxymethoxy)-1,3,5(10)-gonatriene-16beta,17beta diol-16,17-cyclic sulfate; 3-O-(Methoxymethyl)-16,17-O-sulfuryl-16-epiestriol; 3-Methoxymethyl-16beta,17beta-epiestriol-O-cyclic sulfone; FES precursor **Literature:** Roemer J. et al. Automated production of n.c.a. 16α-[^{18}F]fluoroestradiol. Forschungszent. Rossendorf, [Ber.] FZR 1997, 200, 188-192. Lim J.L. et al. The use of 3-methoxymethyl-16α,17beta-epiestriol-O-cyclic sulfone as the precursor in the synthesis of [^{18}F]-16α-fluoroestradiol. Nucl. Med. Biol. 1996, 23, 911-915. Roemer J. et al. 13C NMR spectroscopic characterization of estra-1,3,5(10)-triene-3,17beta-diol and 3,16,17-triols, and some of their 3-O-methoxymethyl and 16α-fluoro derivatives. Forschungszent. Rossendorf, [Ber.] FZR 1996, 122, 27-30. Berridge M.S. et al. Cyclic sulfates: useful substrates for selective nucleophilic substitution. J. Org. Chem. 1990, 55, 1211-1217.	**1900.0001: 1 mg per vial** **1900.0002: 2 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1910	**16α-Fluoroestradiol** **Reference standard for 16α-[^{18}F]Fluoroestradiol** $C_{18}H_{23}FO_2$ **Molar Mass:** 290.37 [92817-10-2] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 90 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: Estra-1,3,5(10)-triene-3,17-diol, 16-fluoro-, (16α,17β) **Synonymes:** 16α-Fluoro-13β-methyl-1,3,5(10)-gonatriene-3,17β-diol; 16α-Fluoro-17β-estradiol; FES **Literature:** Mankoff D.A. et al. [^{18}F]Fluoroestradiol Radiation Dosimetry in Human PET Studies. J. Nucl. Med. 2001, 42, 679-684. Stalford A.C. et al. The metabolism of 16-fluoroestradiols in vivo: chemical strategies for restricting the oxidative biotransformations of an estrogen-receptor imaging agent. Steroids. 1997, 62, 750-761. Roemer J. et al. Further 13C NMR spectroscopic proof of 16α-F configuration in 16-fluoroestradiol derivatives. Forschungszent. Rossendorf, [Ber.] FZR 1997, 165, 192-193.	**1910.0001: 1 mg per vial** **1910.0002: 2 mg per vial** **1910.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1916	**FDHT precursor** **Precursor for [^{18}F]FDHT (16β-[^{18}F]fluoro-5α-dihydrotestosterone)** $C_{22}H_{31}F_3O_6S$ **Molar Mass:** 480.54 [141664-05-3] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Androstane-3,17-dione, 16-[[(trifluoromethyl)sulfonyl]oxy]-, cyclic 3-(1,2-ethanediyl acetal), (5α,16α)- **Synonymes:** 16α-[[(trifluoromethyl)sulfonyl]oxy]-3,3-(ethylenedioxy)androstan-17-one; [^{18}F]FDHT precursor	**Please inquire for customized filling and bulk quantities.** 

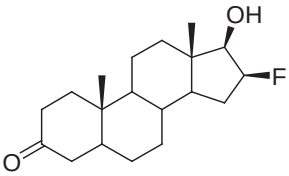
Literature:

Liu A. et al. Fluorine-18-Labeled Androgens: Radiochemical Synthesis and Tissue Distribution Studies on Six fluorine-Substituted Androgens, Potential Imaging Agents for Prostatic Cancer. J. Nucl. Med 1992, 33, 724-734.

Liu A. et al. Fluorine-18-Labeled Androgens: Radiochemical Synthesis and Tissue Distribution Studies on Six fluorine-Substituted Androgens, Potential Imaging Agents for Prostatic Cancer. J. Nucl. Med 1992, 33, 724-734.

Zhou D. et al. Optimization of the preparation of fluorine-18-labeled steroid receptor ligands 16α-[^{18}F]fluoroestradiol (FES), [^{18}F]fluoro furanylnorprogesterone (FFNP), and 16beta-[^{18}F]fluoro-5α-dihydrotestosterone (FDHT)as radiopharmaceuticals. J. Label. Compd. Radiopharm. 2014, 5, 371-377 DOI: 10.1002/jlcr.3191

Dehdashti F. et al. Positron tomographic assessment of androgen receptors in prostatic carcinoma. Eur. J. Nucl. Med. Mol. Imaging 2005, 32, 344-350.

Product Number	Product	Order number / Unit
1918	**FDHT standard** **Reference standard for [^{18}F]FDHT (16β-[^{18}F]fluoro-5α-dihydrotestosterone)** $C_{19}H_{29}FO_2$ **Molar Mass:** 308.43 [141663-88-9] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: Androstan-3-one, 16-fluoro-17-hydroxy-, (5α,16α,17β)- **Synonymes:** 16β-fluoro-5α-dihydrotestosterone; 16β-Fluorodihydrotestosterone; [^{18}F]FDHT standard	**Please inquire for customized filling and bulk quantities.** 

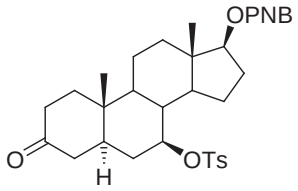
Literature:

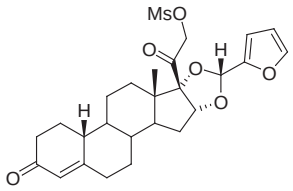
Liu A. et al. Fluorine-18-Labeled Androgens: Radiochemical Synthesis and Tissue Distribution Studies on Six fluorine-Substituted Androgens, Potential Imaging Agents for Prostatic Cancer. J. Nucl. Med 1992, 33, 724-734.

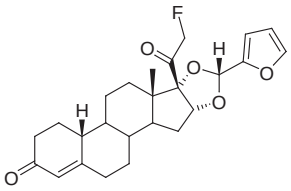
Liu A. et al. Fluorine-18-Labeled Androgens: Radiochemical Synthesis and Tissue Distribution Studies on Six fluorine-Substituted Androgens, Potential Imaging Agents for Prostatic Cancer. J. Nucl. Med 1992, 33, 724-734.

Zhou D. et al. Optimization of the preparation of fluorine-18-labeled steroid receptor ligands 16α-[^{18}F]fluoroestradiol (FES), [^{18}F]fluoro furanylnorprogesterone (FFNP), and 16beta-[^{18}F]fluoro-5α-dihydrotestosterone (FDHT)as radiopharmaceuticals. J. Label. Compd. Radiopharm. 2014, 5, 371-377 DOI: 10.1002/jlcr.3191

Dehdashti F. et al. Positron tomographic assessment of androgen receptors in prostatic carcinoma. Eur. J. Nucl. Med. Mol. Imaging 2005, 32, 344-350.

Product Number	Product	Order number / Unit
1919	**TNB-Androstanone** **Precursor [^{18}F]17β-Hydroxy-7α-fluoro-5α-androstan-3-one** $C_{33}H_{39}NO_8S$ **Molar Mass:** 609.73 CAS-RN not yet assigned Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** 7β-p-Toluenesulfonyloxy-17β-(4-nitrobenzoyloxy)-5α-androstan-3-one **Synonymes:** [^{18}F]17β-Hydroxy-7α-fluoro-5α-androstan-3-one precursor, [^{18}F]F-DHT precursor **Literature:** Labaree D.C. et al. 7α-Iodo and 7α-Fluoro Steroids as Androgen Receptor-Mediated Imaging Agents. J. Med. Chem. 1999, 42, 2021-2034. Labaree D.C. et al. 7α-Iodine-125-Iodo-5α-Dihydrotestosterone: A Radiolabeled Ligand for the Androgen Receptor. J. Nucl. Med. 1997, 38, 402-409.	**Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
1926	**FFNP precursor** **Precursor for [^{18}F]FFNP** **([^{18}F]Fluoro furanyl norprogesterone)** $C_{26}H_{32}O_8S$ **Molar Mass:** 504.59 [445379-33-9] Colourless to off-white solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 19-Norpregn-4-ene-3,20-dione, 16,17-[[(R)-2-furanylmethylene]bis(oxy)]-21-[(methylsulfonyl)oxy]-, (16)-alpha **Synonymes:** 16α,17α-[(R)-(1'-α-Furylmethylidene)dioxy]-21[(methyl)sulfonyl]oxy-19-norpregn-4-ene-3,20-dione; [^{18}F]FFNP precursor **Literature:** Zhou D. et al. Optimization of the preparation of fluorine-18-labeled steroid receptor ligands 16α-[^{18}F]fluoroestradiol (FES), [^{18}F]fluoro furanylnorprogesterone (FFNP), and 16β-[^{18}F]fluoro-5α-dihydrotestosterone (FDHT) as radiopharmaceuticals. J. Label. Compd. Radiopharm. 2014, 5, 371-377. Vijaykumar D. et al. An Efficient Route for the Preparation of a 21-Fluoro Progestin-16alpha,17alpha-Dioxolane, a High-Affinity Ligand for PET Imaging of the Progesterone Receptor. J. Org. Chem. 2002, 67, 4904-4910. Buckman B.O. et al. Fluorine-18-Labeled Progestin 16alpha,17alpha-Dioxolanes: Development of High-Affinity Ligands for the Progesterone Receptor with High in Vivo Target Site Selectivity. J. Med. Chem. 1995, 38, 328-337.	**1926.0002: 2 mg per vial** **1926.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

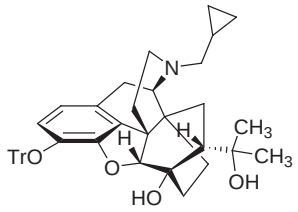
Product Number	Product	Order number / Unit
1928	**FFNP standard** **Reference standard for [^{18}F]FFNP ([^{18}F]Fluoro furanyl norprogesterone)** $C_{25}H_{29}FO_5$ **Molar Mass:** 428.49 [160388-33-0] Colourless to off-white solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 19-Norpregn-4-ene-3,20-dione, 21-fluoro-16,17-[[(R)-2-furanylmethylene]bis(oxy)]-, (16alpha)- **Synonymes:** 21-Fluoro-16α,17α-[(R)-(1'-alpha-furylmethylidene)dioxy]-19-norpregn-4-ene-3,20-dione; Fluoro Furanyl Norprogesterone; 16α,17α-[(R)-(1'-α-Furylmethylidene)dioxy]-21[fluoro]-oxy-19-norpregn-4-ene-3,20-dione; fluoro-19-norprogesterone-16α,17α-endo-furanyl acetal; 21-fluorofuranyl-norprogesterone; 19-Norpregn-4-ene-3,20-dione, 21-fluoro-16,17-[(2-furanylmethylene)bis(oxy)]-, [16α(R)]-; FFNP; [^{18}F]FFNP standard	**1928.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Zhou D. et al. Optimization of the preparation of fluorine-18-labeled steroid receptor ligands 16α-[^{18}F]fluoroestradiol (FES), [^{18}F]fluoro furanylnorprogesterone (FFNP), and 16β-[^{18}F]fluoro-5α-dihydrotestosterone (FDHT) as radiopharmaceuticals. J. Label. Compd. Radiopharm. 2014, 5, 371-377.

Vijaykumar D. et al. An Efficient Route for the Preparation of a 21-Fluoro Progestin-16alpha,17alpha-Dioxolane, a High-Affinity Ligand for PET Imaging of the Progesterone Receptor. J. Org. Chem. 2002, 67, 4904-4910.

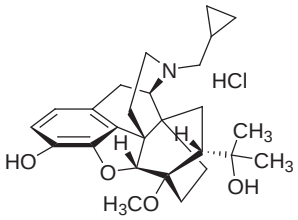
Buckman B.O. et al. Fluorine-18-Labeled Progestin 16alpha,17alpha-Dioxolanes: Development of High-Affinity Ligands for the Progesterone Receptor with High in Vivo Target Site Selectivity. J. Med. Chem. 1995, 38, 328-337.

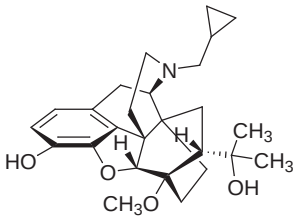
Product Number	Product	Order number / Unit
2000	**3-O-Trityl-6-O-desmethyl-diprenorphine** **Precursor for [^{11}C]Diprenorphine** **Nonselective opioid receptor antagonist** $C_{44}H_{47}NO_4$ **Molar Mass:** 653.87 [157891-92-4] Colourless or nearly colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: 6,14-Ethenomorphinan-7-methanol, 17-(cyclopropylmethyl)-4,5-epoxy-18,19-dihydro-6-hydroxy-α,α-dimethyl-3-(triphenylmethoxy)-, (5α, 7α) **Synonymes:** TDDPN; TDPN	**2000.0002: 2 mg per vial** **Please inquire for customized filling and bulk quantities.** 

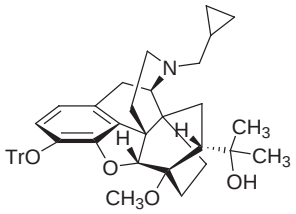
Literature:

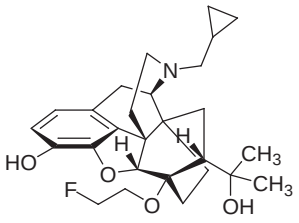
Luthra S.K. et al. Automated radiosyntheses of [6-O-methyl-^{11}C]-diprenorphine and [6-O-methyl-^{11}C]buprenorphine from 3-O-trityl protected precursors. Appl. Radiat. Isot. 1994, 45, 857-873.

Wester H.-J. et al. 6-O-(2-[^{18}F]Fluoroethyl)-6-O-Desmethyl-diprenorphine ([^{18}F]DPN): Synthesis, Biologic Evaluation, and Comparison with [^{11}C]DPN in Humans. J. Nucl. Med. 2000, 41, 1279-1286.

Product Number	Product	Order number / Unit
2010	**Diprenorphine hydrochloride** **Reference standard for [^{11}C]Diprenorphine** **Nonselective opioid receptor antagonist** Controlled substance, license required in most countries. $C_{26}H_{36}ClNO_4$ **Molar Mass:** 462.02 [16808-86-9] Colourless or nearly colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: 6,14-Ethenomorphinan-7-methanol, 17-(cyclopropylmethyl)-4,5-epoxy-18,19-dihydro-3-hydroxy-6-methoxy-α,α-dimethyl-, (5α, 7α), hydrochloride **Synonymes:** DPN · HCl **Literature:** von Herz A. et al. Rezeptorbesetzung und pharmakologische Wirkung, dargestellt am Beispiel der Opiate. Arzneim.-Forsch./Drug. Res. 1977, 27, 1865-1867. Takemori A.E. et al. Studies on the quantitative antagonism of analgesics by naloxone and diprenorphine. Eur. J. Pharmacol. 1972, 20, 85-92. Marton J. et al. Herstellung von 6,14-Ethenomorphinan-Derivaten. Liebigs Ann. 1993, 915-919. Marton J. et al. Herstellung von 6,14-Ethenomorphinan-Derivaten. Monatsh. für Chemie 1994, 125, 1229-1239.	**2010.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

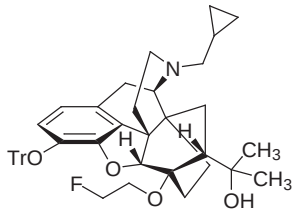
Product Number	Product	Order number / Unit
2020	**Diprenorphine** **Reference standard for [^{11}C]Diprenorphine** **Nonselective opioid receptor antagonist** Controlled substance, license required in most countries. $C_{26}H_{35}NO_4$ **Molar Mass:** 425.56 [14357-78-9] Colourless or nearly colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: 6,14-Ethenomorphinan-7-methanol, 17-(cyclopropylmethyl)-4,5-epoxy-18,19-dihydro-3-hydroxy-6-methoxy-α,α-dimethyl-, (5α, 7α) **Synonymes:** DPN **Literature:** von Herz A. et al. Rezeptorbesetzung und pharmakologische Wirkung, dargestellt am Beispiel der Opiate. Arzneim.-Forsch./Drug. Res. 1977, 27, 1865-1867. Takemori A.E. et al. Studies on the quantitative antagonism of analgesics by naloxone and diprenorphine. Eur. J. Pharmacol. 1972, 20, 85-92. Marton J. et al. Herstellung von 6,14-Ethenomorphinan-Derivaten. Liebigs Ann. 1993, 915-919. Marton J. et al. Herstellung von 6,14-Ethenomorphinan-Derivaten. Monatsh. für Chemie 1994, 125, 1229-1239.	**2020.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2030	**3-O-Trityl-diprenorphine** **Reference standard for byproduct of [^{11}C]Diprenorphine synthesis** $C_{45}H_{49}NO_4$ **Molar Mass:** 667.88 [157891-91-3] Colourless or nearly colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: 6,14-Ethenomorphinan-7-methanol, 17-(cyclopropylmethyl)-4,5-epoxy-18,19-dihydro-6-methoxy-α,α-dimethyl-3-(triphenylmethoxy)-, (5α, 7α) **Synonymes:** TDPN **Literature:** Luthra S.K. et al. Automated radiosyntheses of [6-O-methyl-^{11}C]-diprenorphine and [6-O-methyl-^{11}C]buprenorphine from 3-O-trityl protected precursors. Appl. Radiat. Isot. 1994, 45, 857-873.	**2030.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2040	**6-O-Fluoroethyl-6-O-desmethyl-diprenorphine** **Reference standard for [^{18}F]Fluoroethyl-diprenorphine** **Nonselective opioid receptor antagonist** $C_{27}H_{36}FNO_4$ **Molar Mass:** 457.58 CAS-RN not yet assigned Colourless to yellowish solid packaged in dark glass screw cap vials. **Purity:** > 90 % **Certificates:** CoA; ^{1}H, ^{13}C and ^{19}F NMR spectra **Chemical Name:** 6,14-Ethenomorphinan-7-methanol, 17-(cyclopropylmethyl)-4,5-epoxy-18,19-dihydro-3-hydroxy-α,α-dimethyl-6-(2-fluoroethoxy)-, (5α, 7α) **Synonymes:** FETDPN **Literature:** Wester H.-J. et al. Synthesis, preclinical evaluation and first human study of [^{18}F]Diprenorphine ([^{18}F]DPN) for central opioid receptor imaging with PET. J. Nucl. Med. 1998, 39, Proceedings of the 45th Annual Meeting, Toronto, Ontario Canada; 73P. Wester H.-J. et al. 6-O-(2-[^{18}F]Fluoroethyl)-6-O-Desmethyl-diprenorphine ([^{18}F]DPN): Synthesis, Biologic Evaluation, and Comparison with [^{11}C]DPN in Humans. J. Nucl. Med. 2000, 41, 1279-1286.	**2040.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2050	**6-O-Fluoroethyl-6-O-desmethyl-3-O-trityl-diprenorphine** **Reference standard for byproduct of [^{18}F]Fluoroethyl-diprenorphine synthesis**	**2050.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_{46}H_{50}FNO_4$ **Molar Mass:** 699.89



CAS-RN not yet assigned

Yellow solid packaged in dark glass screw cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H, ^{13}C and ^{19}F NMR spectra

Chemical Name:
6,14-Ethenomorphinan-7-methanol, 17-(cyclopropylmethyl)-4,5-epoxy-18,19-dihydro-6-(2-fluoroethoxy)-3-(triphenylmethoxy)-α,α-dimethyl-, 5(α, 7α)

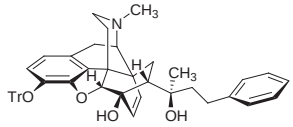
Synonymes:
FEtTrDPN; 6-O-Fluoroethyl-6-O-desmethyl-3-O-trityl-DPN

Literature:
Wester H.-J. et al. Synthesis, preclinical evaluation and first human study of [^{18}F]Diprenorphine ([^{18}F]DPN) for central opioid receptor imaging with PET. J. Nucl. Med. 1998, 39, Proceedings of the 45th Annual Meeting, Toronto, Ontario Canada; 73P.

Wester H.-J. et al. 6-O-(2-[^{18}F]Fluoroethyl)-6-O-Desmethyl-diprenorphine ([^{18}F]DPN): Synthesis, Biologic Evaluation, and Comparison with [^{11}C]DPN in Humans. J. Nucl. Med. 2000, 41, 1279-1286.

Product Number	Product	Order number / Unit
2051	**3-O-Trityl-6-O-desmethyl-phenethyl-orvinol** **Precursor for [^{11}C]Phenethyl-orvinol**	**2051.0002: 2 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_{48}H_{47}NO_4$ **Molar Mass:** 701.89



[1187551-69-4]

Colourless to yellowish solid packaged in dark glass crimp cap vials.

Purity: > 95 %

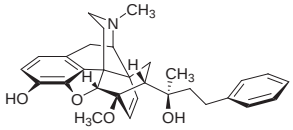
Certificates:
CoA; ^{1}H and ^{13}C NMR spectra

Chemical Name:
CA index name: 6,14-Ethenomorphinan-7-methanol, -4,5-epoxy-6-hydroxy-α,17-dimethyl-,α-(2-phenylethyl)-3-(triphenylmethoxy)-, (5α, 7α)

Synonymes:
TDPEO

Literature:
Marton J. et al. Synthesis and evaluation of a full-agonist orvinol for PET-imaging of opioid receptors: [^{11}C]PEO J. Med. Chem. 2009, 52, 5586-5589.

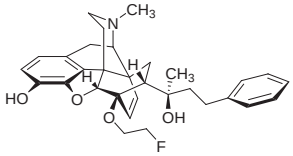
Schoultz B.W. et al. Synthesis and evaluation of three structurally related ^{18}F-labeled orvinols of different intrinsic activities: [^{18}F]fluoroethyl-diprenorphine ([^{18}F]FDPN), [^{18}F]fluoroethyl-buprenorphine ([^{18}F]FBPN and [^{18}F]fluoroethyl-phenethyl-orvinol ([^{18}F]FPEO. J. Med. Chem. 2014, 57, 5464-5469.

Product Number	Product	Order number / Unit
2052	**Phenethyl-orvinol** **Reference standard for [^{11}C]Phenethyl-orvinol** $C_{30}H_{35}NO_4$ **Molar Mass:** 473.60 [14521-98-3 Colourless to yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: 6,14-Ethenomorphinan-7-methanol, -4,5-epoxy-6-hydroxy-α,17-dimethyl-,α-(2-phenylethyl)-3-(triphenylmethoxy)-, (5α, 7α) **Synonymes:** PEO	**2052.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Marton J. et al. Synthesis and evaluation of a full-agonist orvinol for PET-imaging of opioid receptors: [^{11}C]PEO J. Med. Chem. 2009, 52, 5586-5589.

Hjørnevik T. et al. Spinal long-term potentiation is associated with reduced opioid neurotransmission in the rat brain. Clin. Physiol. Funct. Imaging 2010, 30, 285-293.

Product Number	Product	Order number / Unit
2053	**6-O-(2-Fluoroethyl)-6-O-desmethyl-phenethyl-orvinol** **Reference standard for [^{18}F]FE-PEO** $C_{31}H_{36}FNO_4$ **Molar Mass:** 505.62 CAS-RN not yet assigned Colourless to yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H, ^{13}C and ^{19}F NMR spectra **Chemical Name:** CA index name: 6,14-Ethenomorphinan-7-methanol, -4,5-epoxy-6-(2-fluoroethoxy)-α,17-dimethyl-,α-(2-phenylethyl)-3-(triphenylmethoxy)-, (5α, 7α) **Synonymes:** FE-PEO	**2053.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Marton J. et al. Design and synthesis of an 18F-labeled version of phenethyl-orvinol ([^{18}F]FE-PEO) for PET-imaging of opioid receptors. Molecules 2012, 17, 11554-11569.

Riss P.J. et al. Syntheis and evaluation of ^{18}F-FE-PEO in rodents: An ^{18}F-labeled full agonist for opioid receptor imaging. J. Nucl. Med. 2013, 54, 299-305.

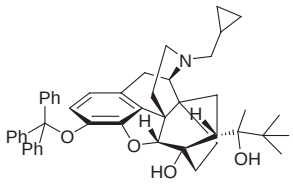
Schoultz, B. W. et al. Synthesis and evaluation of three structurally related ^{18}F-labeled orvinols of different intrinsic activities: [^{18}F]fluoroethyl-diprenorphine ([^{18}F]FDPN), [^{18}F]fluoroethyl-buprenorphine ([^{18}F]FBPN and [^{18}F]fluoroethyl-phenethyl-orvinol ([^{18}F]FPEO. J. Med. Chem. 2014, 57, 5464-5469.

Product Number	Product	Order number / Unit
2055	**3-O-Trityl-6-O-desmethyl-buprenorphine** **Precursor for 6-O-[^{11}C]-buprenorphine**	**2055.0001: 1 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_{47}H_{53}NO_4$ **Molar Mass:** 695.93

[157891-93-5]

Colourless to yellowish solid packaged in dark glass screw cap vials.



Purity: > 95 %

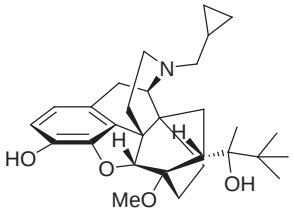
Certificates:
CoA; ^{1}H and ^{13}C NMR spectra

Chemical Name:
CA index name: 6,14-Ethenomorphinan-7-methanol, 17-(cyclporopyl-methyl)-α-(1,1-dimethylethyl)-4,5-epoxy-18,19-dihydro-6-hydroxy-α-methyl-3-(triphenylmethoxy)-, (5α, 7α(S))

Synonymes:
TDBPN

Literature:
Luthra S.K. et al. Automated radiosyntheses of [6-O-methyl-^{11}C]-diprenorphine and [6-O-methyl-^{11}C]buprenorphine from 3-O-trityl protected precursors. Appl. Radiat. Isot. 1994, 45, 857-873.

Product Number	Product	Order number / Unit
2056	**Buprenorphine hydrochloride** **Reference standard for 6-O-[^{11}C]-buprenorphine**	**2056.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**



Controlled substance, license required in most countries.

$C_{29}H_{41}NO_4 \cdot HCl$ **Molar Mass:** 504.10

[53152-21-9]

Colourless to off-white crystalline powder packaged in dark glass crimp cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H and ^{13}C NMR spectra

Chemical Name:
CA index names: 6,14-Ethenomorphinan-7-methanol, 17-(cyclopropylmethyl)-α-(1,1-dimethylethyl)-4,5-epoxy-18,19-dihydro-3-hydroxy-6-methoxy-α-methyl-, hydrochloride (1:1); 6,14-Ethenomorphinan-7-methanol, 17-(cyclopropylmethyl)-α-(1,1-dimethylethyl)-4,5-epoxy-18,19-dihydro-3-hydroxy-6-methoxy-α-methyl-, hydrochloride, [5α,7α(S)]-; 6,14-Ethenomorphinan-7-methanol, 17-(cyclopropylmethyl)-α-(1,1-dimethylethyl)-4,5-epoxy-18,19-dihydro-3-hydroxy-6-methoxy-α-methyl-, hydrochloride, (αS,5α,7α)-

Synonymes:
Buprederm; Buprenex

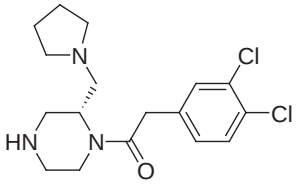
Literature:

Luthra S.K. et al. Automated radiosyntheses of [6-O-methyl-^{11}C]-diprenorphine and [6-O-methyl-^{11}C]buprenorphine from 3-O-trityl protected precursors. Appl. Radiat. Isot. 1994, 45, 857-873.

Luthra S.K. et al. Preparation of [^{11}C]buprenorphine - A potential radioligand for the study of the opiate receptor system in vivo. Int. J. Rad. Appl. Instrum. A. 1987, 38, 65-6.

Lever J.R. et al. Facile synthesis of [^{11}C]buprenorphine for positron emission tomographic studies of opioid receptors. J. Rad. Appl. Instrum. A, 1990, 41, 745-52.

Shiue C.Y. et al. A comparison of the brain uptake of N-(cyclopropyl[^{11}C]methyl)norbuprenorphine ([^{11}C]buprenorphine) and N-(cyclopropyl[^{11}C]methyl)nordiprenorphine ([^{11}C]diprenorphine) in baboon using PET. Int. J. Rad. Appl. Instrum. B, 1991, 18, 281-288.

Product Number	Product	Order number / Unit
2060	**(S)-(-)-Normethylcarbamoyl-GR 103545** **Precursor for (R)-(-)-[^{11}C]-GR 103545** $C_{17}H_{23}Cl_2N_3O$ **Molar Mass:** 356.29 [260992-21-0] Yellowish oil packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: Ethanone, 2-(3,4-dichlorophenyl)-1-[(2S)-2-(1-pyrrolidinylmethyl)-1-piperazinyl]- **Synonymes:** (2S)-2-(3,4-Dichlorophenyl)-1-(2-pyrrolidin-1-ylmethyl-piperazine-1-yl)-ethanon; (2S)-1-[(3,4-Dichlorophenyl)acetyl]-2-(1-pyrrolidinymethyl)piperazine	**2060.0001: 1 mg per vial** **2060.0003: 3 mg per vial** **2060.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

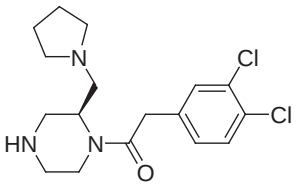
Ravert H.T. et al. [^{11}C]-GR 89696, a potent kappa opiate receptor radioligand; in vivo binding of the R and S enantiomers. Nuc. Med. Biol. 2002, 29, 47-53.

Talbot P.S. et al. ^{11}C-GR 103545, a Radiotracer for Imaging κ-Opioid Receptors In Vivo with PET: Synthesis and Evaluation in Baboons. J. Nucl. Med. 2005, 46, 484-494.

Naylor A. et al. A Potent New class of κ-Receptor Agonist: 4-Substituted 1-(Arylacetyl)-2-[(dialkylamino)methyl]piperazines. J. Med. Chem. 1993, 36, 2075-2083.

Schoultz B.W. et al. A New Method for Radiosynthesis of ^{11}C-Labeled Carbamate Groups and its Application for a Highly Efficient Synthesis of the Kappa-Opioid Receptor Tracer [^{11}C]GR 103545. The Open Med. Chem. J. 2008, 2 ,72-74.

Nabulsi N.B. et al. [^{11}C]GR103545: novel one-pot radiosynthesis with high specific activity. Nucl. Med. Biol. 2011, 38, 215-21.

Product Number	Product	Order number / Unit
2061	**(R)-(+)-Normethylcarbamoyl-GR 103545** **Precursor for (S)-(+)-[^{11}C]-GR 103545** $C_{17}H_{23}Cl_2N_3O$ **Molar Mass:** 356.29 [199470-02-5] Yellowish oil packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: Piperazine, 1-[(3,4-dichlorophenyl)acetyl]-2-(1-pyrrolidinylmethyl)-, (2R) **Synonymes:** (2R)-2-(3,4-Dichlorophenyl)-1-(2-pyrrolidin-1-ylmethyl-piperazine-1-yl)-ethanon; (2R)-1-[(3,4-Dichlorophenyl)acetyl]-2-(1-pyrrolidinymethyl)piperazine	**2061.0001: 1 mg per vial** **2061.0003: 3 mg per vial** **2061.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

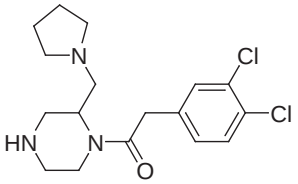
Literature:

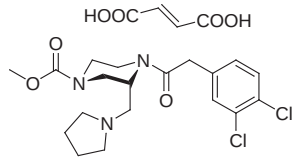
Ravert H.T. et al. [^{11}C]-GR 89696, a potent kappa opiate receptor radioligand; in vivo binding of the R and S enantiomers. Nuc. Med. Biol. 2002, 29, 47-53.

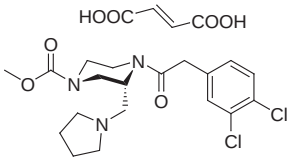
Talbot P.S. et al. ^{11}C-GR 103545, a Radiotracer for Imaging κ-Opioid Receptors In Vivo with PET: Synthesis and Evaluation in Baboons. J. Nucl. Med. 2005, 46, 484-494.

Naylor A. et al. A Potent New class of κ-Receptor Agonist: 4-Substituted 1-(Arylacetyl)-2-[(dialkylamino)methyl]piperazines. J. Med. Chem. 1993, 36, 2075-2083.

Schoultz B.W. et al. A New Method for Radiosynthesis of ^{11}C-Labeled Carbamate Groups and its Application for a Highly Efficient Synthesis of the Kappa-Opioid Receptor Tracer [^{11}C]GR 103545. The Open Med. Chem. J. 2008, 2 ,72-74.

Product Number	Product	Order number / Unit
2062	**Normethylcarbamoyl-GR 89696** **Precursor for [^{11}C]-GR 89696** $C_{17}H_{23}Cl_2N_3O$ **Molar Mass:** 356.29 [126766-48-1] Yellowish oil packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: Ethanone, 2-(3,4-dichlorophenyl)-1-[2-(1-pyrrolidinylmethyl)-1-piperazinyl]- **Synonymes:** 2-(3,4-Dichlorophenyl)-1-(2-pyrrolidin-1-ylmethyl-piperazine-1-yl)-ethanon; 1-[(3,4-Dichlorophenyl)acetyl]-2-(1-pyrrolidinymethyl)piperazine; Descarbamate-GR 89696 **Literature:** Ravert H.T. et al. [^{11}C]-GR 89696, a potent kappa opiate receptor radioligand; in vivo binding of the R and S enantiomers. Nuc. Med. Biol. 2002, 29, 47-53. Talbot P.S. et al. ^{11}C-GR 103545, a Radiotracer for Imaging κ-Opioid Receptors In Vivo with PET: Synthesis and Evaluation in Baboons. J. Nucl. Med. 2005, 46, 484-494. Naylor A. et al. A Potent New class of κ-Receptor Agonist: 4-Substituted 1-(Arylacetyl)-2-[(dialkylamino)methyl]piperazines. J. Med. Chem. 1993, 36, 2075-2083. Schoultz B.W. et al. A New Method for Radiosynthesis of ^{11}C-Labeled Carbamate Groups and its Application for a Highly Efficient Synthesis of the Kappa-Opioid Receptor Tracer [^{11}C]GR 103545. The Open Med. Chem. J. 2008, 2 ,72-74.	**2062.0001: 1 mg per vial** **2062.0003: 3 mg per vial** **2062.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2070	**GR 89696 fumarate** **Reference standard for (R)-(-)-[^{11}C]GR 103545 and (S)-(+)-[^{11}C]GR 103545** **Highly potent and selective κ opioid receptor agonist** $C_{19}H_{25}Cl_2N_3O_3 \cdot C_4H_4O_4$ **Molar Mass:** 530.40 [126766-32-3] Off-white solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: 1-Piperazinecarboxylic acid, 4-[(3,4-dichlorphenyl)acetyl]-3-(1-pyrrolidinylmethyl)-, methyl ester, (E)-2-butenedioate (1:1) **Synonymes:** GR 89696 fumarate salt; 4-[(3,4-dichlorphenyl)acetyl]-3-(1-pyrrolidinylmethyl)-1-piperazinecarboxylic acid methyl ester fumarate **Literature:** Ravert H.T. et al. [^{11}C]-GR 89696, a potent kappa opiate receptor radioligand; in vivo binding of the R and S enantiomers. Nuc. Med. Biol. 2002, 29, 47-53. Talbot P.S. et al. ^{11}C-GR 103545, a Radiotracer for Imaging κ-Opioid Receptors In Vivo with PET: Synthesis and Evaluation in Baboons. J. Nucl. Med. 2005, 46, 484-494. Naylor A. et al. A Potent New class of κ-Receptor Agonist: 4-Substituted 1-(Arylacetyl)-2-[(dialkylamino)methyl]piperazines. J. Med. Chem. 1993, 36, 2075-2083. Schoultz B.W. et al. A New Method for Radiosynthesis of ^{11}C-Labeled Carbamate Groups and its Application for a Highly Efficient Synthesis of the Kappa-Opioid Receptor Tracer [^{11}C]GR 103545. The Open Med. Chem. J. 2008, 2 ,72-74.	**2070.0001: 1 mg per vial** **2070.0005: 5 mg per vial** **2070.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2071	**(R)-(-)-GR103545 fumarate** **Reference standard for (R)-(-)-[^{11}C]GR103545** **Active enantiomer of the selective kappa opioid receptor agonist GR89696** $C_{19}H_{25}Cl_2N_3O_3 \cdot C_4H_4O_4$ **Molar Mass:** 530.40 [126766-43-6] Off-white solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** 1-Piperazinecarboxylic acid, 4-[(3,4-dichlorphenyl)acetyl]-3-(1-pyrrolidinylmethyl)-, methyl ester, (R)-, (E)-2-butenedioate (1:1) **Synonymes:** (R)-(-)-GR103545 fumarate salt; (R)-4-[(3,4-dichlorphenyl)acetyl]-3-(1-pyrrolidinylmethyl)-1-piperazinecarboxylic acid methyl ester fumarate	**2071.0001: 1 mg per vial** **2071.0005: 5 mg per vial** **2071.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

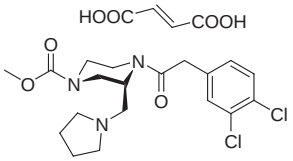
Literature:

Ravert H.T. et al. [^{11}C]-GR 89696, a potent kappa opiate receptor radioligand; in vivo binding of the R and S enantiomers. Nuc. Med. Biol. 2002, 29, 47-53.

Talbot P.S. et al. ^{11}C-GR 103545, a Radiotracer for Imaging κ-Opioid Receptors In Vivo with PET: Synthesis and Evaluation in Baboons. J. Nucl. Med. 2005, 46, 484-494.

Naylor A. et al. A Potent New class of κ-Receptor Agonist: 4-Substituted 1-(Arylacetyl)-2-[(dialkylamino)methyl]piperazines. J. Med. Chem. 1993, 36, 2075-2083.

Schoultz B.W. et al. A New Method for Radiosynthesis of ^{11}C-Labeled Carbamate Groups and its Application for a Highly Efficient Synthesis of the Kappa-Opioid Receptor Tracer [^{11}C]GR 103545. The Open Med. Chem. J. 2008, 2 ,72-74.

Product Number	Product	Order number / Unit
2072	**(S)-(+)-GR89696 fumarate** **Reference standard for (S)-(+)-[^{11}C]GR89696** **Less active enantiomer of the selective kappa opioid receptor agonist GR89696** $C_{19}H_{25}Cl_2N_3O_3 \cdot C_4H_4O_4$ **Molar Mass:** 530.40 [150133-21-4] Off-white solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** 1-Piperazinecarboxylic acid, 4-[(3,4-dichlorphenyl)acetyl]-3-(1-pyrrolidinylmethyl)-, methyl ester, (S)-, (E)-2-butenedioate (1:1) **Synonymes:** (S)-(+)-GR89696 fumarate salt; (S)-4-[(3,4-dichlorphenyl)acetyl]-3-(1-pyrrolidinylmethyl)-1-piperazinecarboxylic acid methyl ester fumarate	**2072.0001: 1 mg per vial** **2072.0005: 5 mg per vial** **2072.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

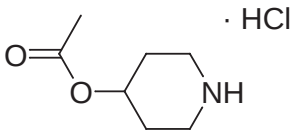
Literature:

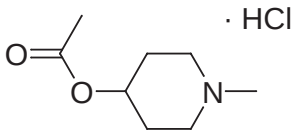
Ravert H.T. et al. [^{11}C]-GR 89696, a potent kappa opiate receptor radioligand; in vivo binding of the R and S enantiomers. Nuc. Med. Biol. 2002, 29, 47-53.

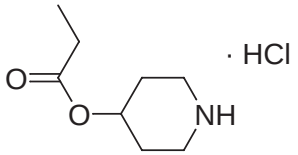
Talbot P.S. et al. ^{11}C-GR 103545, a Radiotracer for Imaging κ-Opioid Receptors In Vivo with PET: Synthesis and Evaluation in Baboons. J. Nucl. Med. 2005, 46, 484-494.

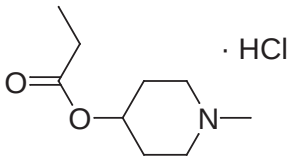
Naylor A. et al. A Potent New class of κ-Receptor Agonist: 4-Substituted 1-(Arylacetyl)-2-[(dialkylamino)methyl]piperazines. J. Med. Chem. 1993, 36, 2075-2083.

Schoultz B.W. et al. A New Method for Radiosynthesis of ^{11}C-Labeled Carbamate Groups and its Application for a Highly Efficient Synthesis of the Kappa-Opioid Receptor Tracer [^{11}C]GR 103545. The Open Med. Chem. J. 2008, 2 ,72-74.

Product Number	Product	Order number / Unit
2110	**Acetic acid piperidin-4-yl ester hydrochloride** **Precursor for [^{11}C]AMP** $C_7H_{13}NO_2 \cdot HCl$ **Molar Mass:** 179.64 [94886-04-1] Colourless crystals packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 4-Piperidinol acetate, hydrochloride **Synonymes:** 4-Acetoxy-piperidine, hydrochloride; 4-Piperidinyl acetate, hydrochloride; PA · HCl **Literature:** Nguyen T.B. et al. Syntheses of carbon-11 labeled piperidine esters as potential in vivo substrates for acetylcholinesterase. Nucl. Med. Biol. 1998, 25, 761-768. Iyo M. et al. Measurement of acetylcholinesterase by positron emission tomography in the brains of healthy controls and patients with Alzheimer´s disease. Lancet 1997, 349, 1805-1809. Irie T. et al. Design and Evaluation of Radioactive Acetylcholine Analogs for Mapping Brain Acetylcholinesterase (AchE) In Vivo. Nucl. Med. Biol. 1994, 21, 801-808.	**2110.0001: 1 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2120	**Acetic acid 1-methyl-piperidin-4-yl ester hydrochloride** **Reference standard for [^{11}C]AMP** $C_8H_{15}NO_2 \cdot HCl$ **Molar Mass:** 193.67 [58931-63-8] Colourless crystals packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 4-Piperidinol, 1-methyl-, acetate, hydrochloride **Synonymes:** 1-Methylpiperidinyl acetate, hydrochloride; MPA · HCl; PMA · HCl **Literature:** Nguyen T.B. et al. Syntheses of carbon-11 labeled piperidine esters as potential in vivo substrates for acetylcholinesterase. Nucl. Med. Biol. 1998, 25, 761-768. Iyo M. et al. Measurement of acetylcholinesterase by positron emission tomography in the brains of healthy controls and patients with Alzheimer´s disease. Lancet 1997, 349, 1805-1809. Irie T. et al. Design and Evaluation of Radioactive Acetylcholine Analogs for Mapping Brain Acetylcholinesterase (AchE) In Vivo. Nucl. Med. Biol. 1994, 21, 801-808.	**2120.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2130	**Propionic acid piperidin-4-yl ester hydrochloride** **Precursor for [^{11}C]PMP** $C_8H_{15}NO_2 \cdot HCl$ **Molar Mass:** 193.67 [219859-83-3] Colourless crystals packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 4-Piperidinol, propionate, hydrochloride **Synonymes:** PP · HCl **Literature:** Nguyen T.B. et al. Syntheses of carbon-11 labeled piperidine esters as potential in vivo substrates for acetylcholinesterase. Nucl. Med. Biol. 1998, 25, 761-768. Iyo M. et al. Measurement of acetylcholinesterase by positron emission tomography in the brains of healthy controls and patients with Alzheimer´s disease. Lancet 1997, 349, 1805-1809. Irie T. et al. Design and Evaluation of Radioactive Acetylcholine Analogs for Mapping Brain Acetylcholinesterase (AchE) In Vivo. Nucl. Med. Biol. 1994, 21, 801-808. Snyder S.E. et al. Synthesis of 1-[^{11}C]Methylpiperidin-4-yl Propionate ([^{11}C]PMP) for in Vivo Measurements of Acetylcholinesterase Activity. Nucl. Med. Biol. 1998, 25, 751-754.	**2130.0001: 1 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2140	**Propionic acid 1-methyl-piperidin-4-yl ester hydrochloride** **Reference standard for [^{11}C]PMP** $C_9H_{17}NO_2 \cdot HCl$ **Molar Mass:** 207.7 [64219-77-8] Colourless crystals packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 4-Piperidinol, 1-methyl-, propanoate, hydrochloride **Synonymes:** PMP · HCl **Literature:** Nguyen T.B. et al. Syntheses of carbon-11 labeled piperidine esters as potential in vivo substrates for acetylcholinesterase. Nucl. Med. Biol. 1998, 25, 761-768. Iyo M. et al. Measurement of acetylcholinesterase by positron emission tomography in the brains of healthy controls and patients with Alzheimer´s disease. Lancet 1997, 349, 1805-1809. Irie T. et al. Design and Evaluation of Radioactive Acetylcholine Analogs for Mapping Brain Acetylcholinesterase (AchE) In Vivo. Nucl. Med. Biol. 1994, 21, 801-808. Snyder S.E. et al. Synthesis of 1-[^{11}C]Methylpiperidin-4-yl Propionate ([^{11}C]PMP) for in Vivo Measurements of Acetylcholinesterase Activity. Nucl. Med. Biol. 1998, 25, 751-754.	**2140.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2150	**Butyric acid piperidin-4-yl ester hydrochloride** **Precursor for [^{11}C]BMP**	**2150.0001: 1 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_9H_{17}NO_2 \cdot HCl$ **Molar Mass:** 207.7

CAS-RN not yet assigned

Colourless crystals packaged in dark glass crimp cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H NMR spectrum

Chemical Name:
4-Piperidinol, butyrate, hydrochloride

Synonymes:
BP · HCl

Literature:

Nguyen T.B. et al. Syntheses of carbon-11 labeled piperidine esters as potential in vivo substrates for acetylcholinesterase. Nucl. Med. Biol. 1998, 25, 761-768.

Iyo M. et al. Measurement of acetylcholinesterase by positron emission tomography in the brains of healthy controls and patients with Alzheimer´s disease. Lancet 1997, 349, 1805-1809.

Kikuchi T. et al. Piperidinyl and pyrrolidinyl butyrates as radiotracers for measuring cerebral butyrylcholinesterase activity evaluation in rats. J. Labelled Compd. Radiopharm. 2001, 44, Suppl. 1, 322.

Product Number	Product	Order number / Unit
2160	**Butyric acid 1-methyl-piperidin-4-yl ester hydrochloride** **Reference standard for [^{11}C]BMP**	**2160.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_{10}H_{19}NO_2 \cdot HCl$ **Molar Mass:** 221.72

CAS-RN not yet assigned

Colourless crystals packaged in dark glass crimp cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H NMR spectrum

Chemical Name:
4-Piperidinol, 1-methyl-, butyrate, hydrochloride

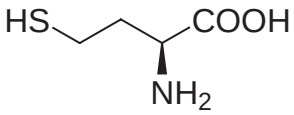
Synonymes:
BMP · HCl

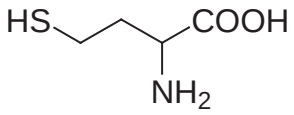
Literature:

Nguyen T.B. et al. Syntheses of carbon-11 labeled piperidine esters as potential in vivo substrates for acetylcholinesterase. Nucl. Med. Biol. 1998, 25, 761-768.

Iyo M. et al. Measurement of acetylcholinesterase by positron emission tomography in the brains of healthy controls and patients with Alzheimer´s disease. Lancet 1997, 349, 1805-1809.

Kikuchi T. et al. Piperidinyl and pyrrolidinyl butyrates as radiotracers for measuring cerebral butyrylcholinesterase activity evaluation in rats. J. Labelled Compd. Radiopharm. 2001, 44, Suppl. 1, 322.

Product Number	Product	Order number / Unit
2200	**L-Homocysteine** **Precursor for L-[^{11}C]Methyl-methionine** $C_4H_9NO_2S$ **Molar Mass:** 135.18 [6027-13-0] Colourless or nearly colourless solid packaged in dark glass crimp cap vials. **Purity:** > 90 % **Certificates:** CoA; ^{1}H NMR spectrum; HPLC **Chemical Name:** CA index name: Butyric acid, 2-amino-4-mercapto-, L- **Synonymes:** (S)-Homocysteine, (S)-2-Amino-4-mercaptobutanoic acid; Butanoic acid, 2-amino-4-mercapto-, (S)- **Literature:** Schmitz F. et al. Fast Routine Production of L-[^{11}C-Methyl]-methionine with Al_2O_3/KF. Appl. Radiat. Isot. 1995, 46, 893-897. Comar D. et al. Labelling and Metabolism of Methionine-Methyl-^{11}C. Eur. J. Nucl. Med. 1976, 1, 11-14.	**2200.0001: 1 mg per vial** **2200.0002: 2 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2205	**D,L-Homocysteine** **Precursor for D,L-[^{11}C]methyl-methionine (Analytical standard for validation of L-[^{11}C]methyl-methionine synthesis)** $C_4H_9NO_2S$ **Molar Mass:** 135.18 [454-29-5] Colourless or nearly colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Butyric acid, 2-amino-4-mercapto-, DL **Synonymes:** (RS)-Homocysteine; (RS)-2-Amino-4-mercaptobutanoic acid; Butanoic acid, 2-amino-4-mercapto-, (RS) **Literature:** Schmitz F. et al. Fast Routine Production of L-[^{11}C-Methyl]-methionine with Al_2O_3/KF. Appl. Radiat. Isot. 1995, 46, 893-897. Comar D. et al. Labelling and Metabolism of Methionine-Methyl-^{11}C. Eur. J. Nucl. Med. 1976, 1, 11-14.	**Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2210	**L-Homocysteine thiolactone hydrochloride** **Precursor for L-[^{11}C]Methyl-methionine, - ethionine, and -propionine**	**2210.0001: 1 mg per vial** **2210.0002: 2 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_4H_7NOS \cdot HCl$ **Molar Mass:** 153.63

[31828-68-9]

Colourless solid packaged in dark glass crimp cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H NMR spectrum

Chemical Name:
CA index name: 2(3H)-Thiophenone, 3-aminodihydro-, hydrochloride, (3S)-

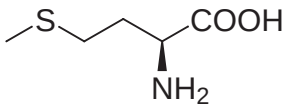
Synonymes:
2(3H)-Thiophenone, 3-aminodihydro-, hydrochloride, (S)-;
2(3H)-Thiophenone, 3-aminodihydro-, hydrochloride, L-

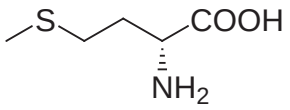
Literature:

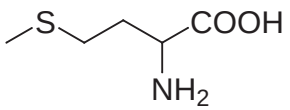
Ishiwata K. et al. Carbon-11 labeled ethionine and propionine as tumor detcting agents. Ann. Nucl. Med. 1997, 11, 115-122.

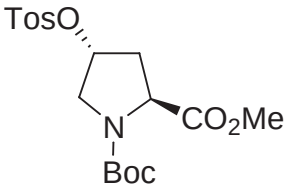
Schmitz F. et al. Fast Routine Production of L-[^{11}C-Methyl]-methionine with Al_2O_3/KF. Appl. Radiat. Isot. 1995, 46, 893-897.

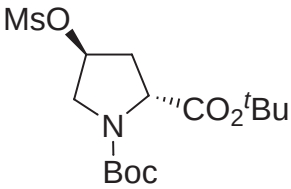
Comar D. et al. Labelling and Metabolism of Methionine-Methyl-^{11}C. Eur. J. Nucl. Med. 1976, 1, 11-14.

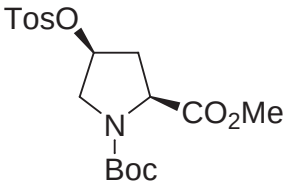
Product Number	Product	Order number / Unit
2220	**L-Methionine** **Reference standard for L-[^{11}C]Methyl-methionine** $C_5H_{11}NO_2S$ **Molar Mass:** 149.21 [63-68-3] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Butyric acid, 2-amino-4-(methylthio)-, L- **Synonymes:** (S)-2-Amino-4-(methylmercapto)butanoic acid; S-Methyl-L-homocysteine; Methionine; Met **Literature:** Schmitz F. et al. Fast Routine Production of L-[^{11}C-Methyl]-methionine with Al_2O_3/KF. Appl. Radiat. Isot. 1995, 46, 893-897. Comar D. et al. Labelling and Metabolism of Methionine-Methyl-^{11}C. Eur. J. Nucl. Med. 1976, 1, 11-14.	**2220.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

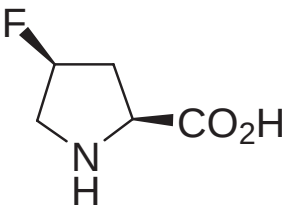
Product Number	Product	Order number / Unit
2229	**D-Methionine** **Reference standard for D-[^{11}C]Methyl-methionine** $C_5H_{11}NO_2S$ **Molar Mass:** 149.21 [348-67-4] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Butyric acid, 2-amino-4-(methylthio)-, D- **Synonymes:** (R)-2-Amino-4-(methylmercapto)butanoic acid; R-Methyl-L-homocysteine; D-Methionine; D-Met **Literature:** Schmitz F. et al. Fast Routine Production of L-[^{11}C-Methyl]-methionine with Al_2O_3/KF. Appl. Radiat. Isot. 1995, 46, 893-897. Comar D. et al. Labelling and Metabolism of Methionine-Methyl-^{11}C. Eur. J. Nucl. Med. 1976, 1, 11-14.	**2229.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

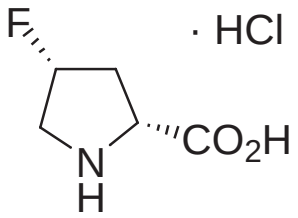
Product Number	Product	Order number / Unit
2230	**D,L-Methionine** **Reference standard for D,L-[^{11}C]Methyl-methionine** $C_5H_{11}NO_2S$ **Molar Mass:** 149.21 [59-51-8] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Butyric acid, 2-amino-4-(methylthio)-, **Synonymes:** 2-Amino-4-(methylmercapto)butanoic acid; Methylhomocysteine; D,L-Methionine; D,L-Met **Literature:** Schmitz F. et al. Fast Routine Production of L-[^{11}C-Methyl]-methionine with Al_2O_3/KF. Appl. Radiat. Isot. 1995, 46, 893-897. Comar D. et al. Labelling and Metabolism of Methionine-Methyl-^{11}C. Eur. J. Nucl. Med. 1976, 1, 11-14.	**2230.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

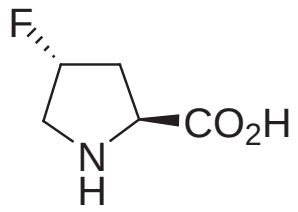
Product Number	Product	Order number / Unit
2300	**N-Boc-trans-4-tosyloxy-L-proline methyl ester** **Precursor for cis-4-[^{18}F]Fluoro-L-proline** $C_{18}H_{25}NO_7S$ **Molar Mass:** 399.45 [88043-21-4] Colourless crystals packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 1,2-pyrrolidinedicarboxylic acid, 4-(((4-methylphenyl)-sulfonyl(oxyl(-1-(1,1-dimethylethyl)-2-methyl ester, (2S, trans) **Synonymes:** N-tert-butyloxycarbonyl-O-p-toluenesulfonyl-L-proline methyl ester; N-tert-butyloxycarbonyl-trans-4-p-toluylsulfonyloxy-L-proline methyl ester; trans-BTPME **Literature:** Hamacher K. et al. [^{18}F]fluoroproline: A potential tracer for collagen synthesis. Radiosynthesis and biological evaluation. 43rd Annual Meeting of the Society of Nuclear Medicine, Denver, Colorado, USA, June 3-5, 1996. J. Nucl. Med. 1996, 37, 41P. Jones H. A. et al. External monitoring of ^{18}F-fluoroproline uptake in a rabbit model of pulmonary fibrosis. Annual Congress of the European Respiratory Society, Berlin, Germany, September 20-24, 1977, European Respiratory Journal Supplement. 1977, 10, 323S-324S. Gupta N. C. et al. Feasibility study for PET imaging of pulmonary fibrosis with cis-4-[^{18}F]fluoro-L-proline (FP). J. Nucl. Med. 1998, 39, Proceedings of the 45th Annual Meeting, Toronto, Ontario, Canada P116-P117. Mazza S. M. A Semi-Automatic Synthesis of cis-4-[^{18}F]fluoro-L-proline using the General Electric FDG Microlab. J. Nucl. Med. 1998, 39, Proceedings of the 45th Annual Meeting, Toronto, Ontario, Canada P144.	**2300.0016: 16 mg per vial** **Please inquire for customized filling and bulk quantities.** 

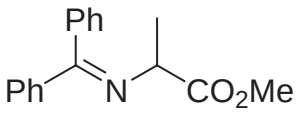
Product Number	Product	Order number / Unit
2301	**N-Boc-trans-4-mesyloxy-D-proline tert-butyl ester** **Precursor for cis-4-[^{18}F]Fluoro-D-proline** $C_{15}H_{27}NO_7S$ **Molar Mass:** 365.44 CAS-RN not yet assigned Colourless solid packaged in dark glass vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** 1,2-Pyrrolidinedicarboxylic acid, 4-[(methylsulfonyl)oxy]-, 1,2-bis(1,1-dimethylethyl) ester, (2R,4S)- **Synonymes:** N-tert-butyloxycarbonyl-O-p-methanesulfonyl-D-proline tert-butyl ester; N-tert-butyloxycarbonyl-trans-4-p-methylsulfonyloxy-D-proline tert-butyl ester; (2R,4S)-Methanesulfonyloxy-pyrrolidine-1,2-dicarboxylic acid di-tert-butyl ester **Literature:** no literature reference available	**2301.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

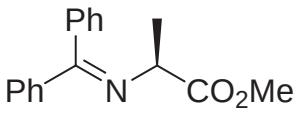
Product Number	Product	Order number / Unit
2310	**N-Boc-cis-4-tosyloxy-L-proline methyl ester** **Precursor for trans-4-[^{18}F]Fluoro-L-proline** $C_{18}H_{25}NO_7S$ **Molar Mass:** 399.45 CAS-RN not yet assigned Colourless crystals packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** 1,2-pyrrolidinedicarboxylic acid, 4-(((4-methyl-phenyl)sulfonyl(oxy(-1-(1,1-dimethylethyl)-2-methyl ester, (2S,4S)-cis **Synonymes:** cis-BTPME **Literature:** Hamacher K. et al. Synthesis of N.C.A. cis- and trans-4-[^{18}F]Fluoro-L-proline, radiotracers for PET-investigation of disordered Matrix protein synthesis. J. Labelled Compd. Radiopharm. 1999, 42, 1135-1144.	**2310.0016: 16 mg per vial** **Please inquire for customized filling and bulk quantities.** 

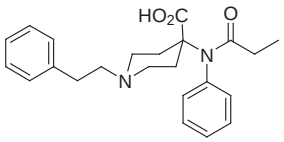
Product Number	Product	Order number / Unit
2320	**cis-4-Fluoro-L-proline** **Reference standard for cis-[^{18}F]Fluoro-L-proline** $C_5H_8FNO_2$ **Molar Mass:** 133.12 [2438-57-5] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: L-Proline, 4-fluoro-, (4S)- **Synonymes:** (2S,4S)-4-Fluoroproline; cis-4-Fluoroproline **Literature:** Hamacher K. et al. Synthesis of N.C.A. cis- and trans-4-[^{18}F]Fluoro-L-proline, radiotracers for PET-investigation of disordered matrix protein synthesis. J. Labelled Compd. Radiopharm. 1999, 42, 1135-1144.	**2320.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

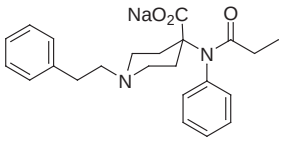
Product Number	Product	Order number / Unit
2321	**cis-4-Fluoro-D-proline hydrochloride** **Reference standard for cis-4-[^{18}F]Fluoro-D-proline** $C_5H_9ClFNO_2$ **Molar Mass:** 169.58 [913820-71-0] (free amino acid) Colourless solid packaged in dark glass vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** D-Proline, 4-fluoro-, (4R)-, hydrochloride salt **Synonymes:** (2R,4R)-4-Fluoroproline hydrochloride salt; cis-4-Fluoro-D-proline hydrochloride salt; (2R,4R)-4-Fluoro-pyrrolidine-2-carboxylic acid hydrochloride salt **Literature:** no literature reference available	**2321.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

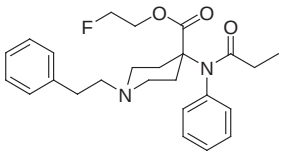
Product Number	Product	Order number / Unit
2330	**trans-4-Fluoro-L-proline** **Reference standard for trans-[^{18}F]Fluoro-L-proline** $C_5H_8FNO_2$ **Molar Mass:** 133.12 [2507-61-1] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: L-Proline, 4-fluoro-, (4R)- **Synonymes:** (2S,4R)-4-Fluoroproline; trans-4-Fluoroproline **Literature:** Hamacher K. et al. Synthesis of N.C.A. cis- and trans-4-[^{18}F]Fluoro-L-proline, radiotracers for PET-investigation of disordered matrix protein synthesis. J. Labelled Compd. Radiopharm. 1999, 42, 1135-1144.	**2330.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

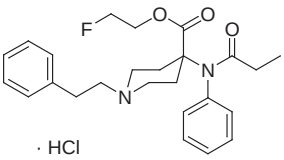
Product Number	Product	Order number / Unit
2340	**rac [^{11}C]-AIB precursor** **Precursor for [^{11}C]-AIB (α-Aminoisobutyric acid)** $C_{17}H_{17}NO_2$ **Molar Mass:** 267.33 [115134-32-2] (S-AIB-precursor) Colourless oil packaged in glass vials. **Purity:** > 90% **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** Methyl N-(diphenylmethylene)alaninate **Synonymes:** N-Benzhydrylidenealanine methyl ester; methyl 2-(benzhydrylidene)alaninate; methyl alanine benzophenone imine; methyl-N-(diphenylmethylene)alaninate **Literature:** Kato K. et al. An efficient and expedient method for the synthesis of 11C-labeled α-aminoisobutyric acid: A tumor imaging agent potentially useful for cancer diagnosis. Bioorg. Med. Chem. Lett. 2011, 21, 2437-2440.	**Please inquire for customized filling and bulk quantities.** 

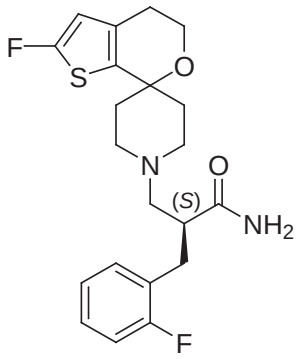
Product Number	Product	Order number / Unit
2342	**S-[^{11}C]-AIB precursor** **Precursor for [^{11}C]-AIB (α-Aminoisobutyric acid)** $C_{17}H_{17}NO_2$ **Molar Mass:** 267.33 [115134-32-2] Colourless solid packaged in glass vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** Methyl N-(diphenylmethylene)alaninate **Synonymes:** Methyl (S)-2-(diphenylmethylideneamino)propanoate, alanine methyl ester benzophenone imine **Literature:** Kato K. et al. An efficient and expedient method for the synthesis of 11C-labeled α-aminoisobutyric acid: A tumor imaging agent potentially useful for cancer diagnosis. Bioorg. Med. Chem. Lett. 2011, 21, 2437-2440.	**Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2390	**Desmethylcarfentanil acid** **Precursor for [^{11}C]Carfentanil** $C_{23}H_{28}N_2O_3$ **Molar Mass:** 380.48 [186022-53-7] Colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 4-Piperidinecarboxylic acid, 4-[(1-oxopropyl)phenylamino]-1-(2-phenylethyl)- **Synonymes:** desmethyl-Caf; desmethyl-CFN **Literature:** Dannals R. et al. Radiosynthesis of an Opiate Receptor Binding Radiotracer: [^{11}C]Carfentanyl. Int. J. Appl. Radiat. Isot. 1985, 36, 303-306. Frost J.J. et al. Comparison of [^{11}C]diprenorphine and [^{11}C]carfentanyl binding to opiate receptors in humans by positron emission tomography. J. Cereb. Blood Flow Metab. 1990, 10, 484-492. Jewett D. M. A simple synthesis of [^{11}C]carfentanil using an extraction disk instead of HPLC. Nucl. Med. Biol. 2001, 28, 733-734. Studenov A.R. et al. Efficient In-Loop Synthesis of High Specific Radioactivity [^{11}C]Carfentanil. J. Labelled Compd. Radiopharm. 2003, 46, 837-842.	**2390.0001: 1 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2400	**Desmethylcarfentanil, sodium salt** **Precursor for [^{11}C]Carfentanil** $C_{23}H_{27}N_2O_3Na$ **Molar Mass:** 402.46 [98598-82-4] Colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 4-Piperidinecarboxylic acid, 4-[(1-oxopropyl)phenylamino]-1-(2-phenylethyl), sodium salt **Synonymes:** Sodium Desmethyl carfentanil **Literature:** Dannals R. et al. Radiosynthesis of an Opiate Receptor Binding Radiotracer: [^{11}C]Carfentanyl. Int. J. Appl. Radiat. Isot. 1985, 36, 303-306. Frost J.J. et al. Comparison of [^{11}C]diprenorphine and [^{11}C]carfentanyl binding to opiate receptors in humans by positron emission tomography. J. Cereb. Blood Flow Metab. 1990, 10, 484-492. Jewett D. M. A simple synthesis of [^{11}C]carfentanil using an extraction disk instead of HPLC. Nucl. Med. Biol. 2001, 28, 733-734. Studenov A.R. et al. Efficient In-Loop Synthesis of High Specific Radioactivity [^{11}C]Carfentanil. J. Labelled Compd. Radiopharm. 2003, 46, 837-842.	**2400.0001: 1 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2420	**Fluoroethyl-Carfentanil** **Reference standard for [^{18}F]Fluoroethylcarfentanil** $C_{25}H_{31}FN_2O_3$ **Molar Mass:** 426.52 [904892-57-5] Yellowish oil packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 4-Piperidinecarboxylic acid, 4-[(1-oxopropyl)phenylamino]-1-(2-phenylethyl)-, 2-fluoroethyl ester **Synonymes:** 2-Fluoroethylcarfentanil **Literature:** Henriksen G. et al. Synthesis of [^{18}F]fluoroalkyl esters of carfentanil. J. Labelled Compd. Radiopharm. 2005, 48, 771-779. Wadsak W. et al. Preparation and radiosynthesis of [^{18}F]FE@CFN (2-[^{18}F]fluoroethyl- 4-[N-(1-oxopropyl)-N-phenylamino]-1-(2-phenylethyl)-4-piperidinecarboxylate): a potential mu-opioid receptor imaging agent. Radiochim. Acta 2007, 95, 33-38.	**2420.0010 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2421	**Fluoroethyl-Carfentanil hydrochloride** **Reference standard for [^{18}F]Fluoroethylcarfentanil** $C_{25}H_{31}FN_2O_3 \cdot HCl$ **Molar Mass:** 462.98 [1007840-96-1] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 4-Piperidinecarboxylic acid, 4-[(1-oxopropyl)phenylamino]-1-(2-phenylethyl)-, 2-fluoroethyl ester, hydrochloride (1:1) **Synonymes:** 2-Fluoroethylcarfentanil, hydrochloride salt **Literature:** Henriksen G. et al. Synthesis of [^{18}F]fluoroalkyl esters of carfentanil. J. Labelled Compd. Radiopharm. 2005, 48, 771-779. Wadsak W. et al. Preparation and radiosynthesis of [^{18}F]FE@CFN (2-[^{18}F]fluoroethyl- 4-[N-(1-oxopropyl)-N-phenylamino]-1-(2-phenylethyl)-4-piperidinecarboxylate): a potential mu-opioid receptor imaging agent. Radiochim. Acta 2007, 95, 33-38.	**2421.0010 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

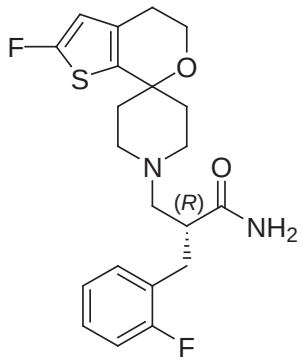
Product Number	Product	Order number / Unit
2450	**(S)-FPSPPA** **Precursor for (S)-[^{11}C]-Methyl-FPSPPA** **2-[(2-Fluorophenyl)methyl]-3-(2-fluorospiro[4,5-dihydrothieno [2,3-c]pyran-7,40-piperidine]-10-yl)propanamide** $C_{21}H_{24}F_2N_2O_2S$ **Molar Mass:** 406.49 [1283095-64-6] White solid packaged in dark glass vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** Spiro[piperidine-4,7'-[7H]thieno[2,3-c]pyran]-1-propanamide, 2'-fluoro-α-[(2-fluorophenyl)methyl]-4',5'-dihydro-, (αS)- **Synonymes:** (2S)-2-[(2-Fluorophenyl)methyl]-3-(2-fluorospiro[4,5-dihydrothieno [2,3-c]pyran-7,40-piperidine]-10-yl)propanamide	**2450.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Pike V. et al. Synthesis and Evaluation of Radioligands for Imaging Brain Nociceptin/Orphanin FQ Peptide (NOP) Receptors with Positron Emission Tomography, J. Med. Chem. 2011, 54, 2687-2700.

Pedregal C. et al. Development of LC-MS/MS-Based Receptor Occupancy Tracers and Positron Emission Tomography Radioligands for the Nociceptin/Orphanin FQ (NOP) Receptor, J. Med. Chem. 2012, 55, 4955-4967.

Kimura Y. et al. Brain and Whole-Body Imaging in Rhesus Monkeys of ^{11}C-NOP-1A, a Promising PET Radioligand for Nociceptin/Orphanin FQ Peptide Receptors, J. Nucl. Med. 2011, 52, 1638-1645.

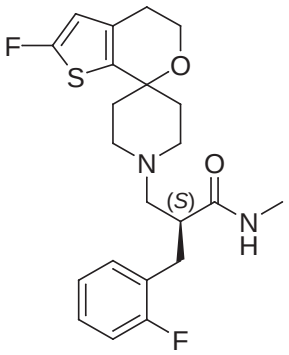
Product Number	Product	Order number / Unit
2460	**(R)-FPSPPA** **Precursor for (R)-[^{11}C]-Methyl-FPSPPA** **2-[(2-Fluorophenyl)methyl]-3-(2-fluorospiro[4,5-dihydrothieno [2,3-c]pyran-7,40-piperidine]-10-yl)propanamide** $C_{21}H_{24}F_2N_2O_2S$ **Molar Mass:** 406.49 [1283095-67-9] White solid packaged in dark glass vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** Spiro[piperidine-4,7'-[7H]thieno[2,3-c]pyran]-1-propanamide, 2'-fluoro-α-[(2-fluorophenyl)methyl]-4',5'-dihydro-, (αR)- **Synonymes:** (2R)-2-[(2-Fluorophenyl)methyl]-3-(2-fluorospiro[4,5-dihydrothieno [2,3-c]pyran-7,40-piperidine]-10-yl)propanamide	**Please inquire for customized filling and bulk quantities.** 

Literature:

Pike V. et al. Synthesis and Evaluation of Radioligands for Imaging Brain Nociceptin/Orphanin FQ Peptide (NOP) Receptors with Positron Emission Tomography, J. Med. Chem. 2011, 54, 2687-2700.

Pedregal C. et al. Development of LC-MS/MS-Based Receptor Occupancy Tracers and Positron Emission Tomography Radioligands for the Nociceptin/Orphanin FQ (NOP) Receptor, J. Med. Chem. 2012, 55, 4955-4967.

Kimura Y. et al. Brain and Whole-Body Imaging in Rhesus Monkeys of ^{11}C-NOP-1A, a Promising PET Radioligand for Nociceptin/Orphanin FQ Peptide Receptors, J. Nucl. Med. 2011, 52, 1638-1645.

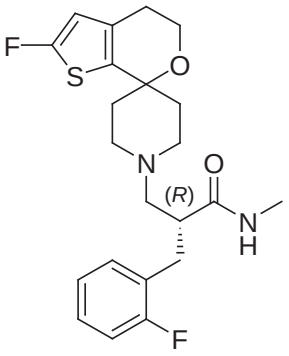
Product Number	Product	Order number / Unit
2470	**(S)-Methyl-FPSPPA** **Reference standard for (S)-[^{11}C]-Methyl-FPSPPA** **2-[(2-Fluorophenyl)methyl]-3-(2-fluorospiro[4,5-dihydrothieno [2,3-c]pyran-7,40-piperidine]-10-yl)propanamide** $C_{22}H_{26}F_2N_2O_2S$ **Molar Mass:** 420.52 [1283095-70-4] White solid packaged in dark glass vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** Spiro[piperidine-4,7'-[7H]thieno[2,3-c]pyran]-1-propanamide, 2'-fluoro-α-[(2-fluorophenyl)methyl]-4',5'-dihydro-N-methyl-, (αS)- **Synonymes:** (2S)-2-[(2-Fluorophenyl)methyl]-3-(2-fluorospiro[4,5-dihydrothieno [2,3-c]pyran-7,40-piperidine]-10-yl)-N-methyl-propanamide	**2470.0020: 20 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Pike V. et al. Synthesis and Evaluation of Radioligands for Imaging Brain Nociceptin/Orphanin FQ Peptide (NOP) Receptors with Positron Emission Tomography, J. Med. Chem. 2011, 54, 2687-2700.

Pedregal C. et al. Development of LC-MS/MS-Based Receptor Occupancy Tracers and Positron Emission Tomography Radioligands for the Nociceptin/Orphanin FQ (NOP) Receptor, J. Med. Chem. 2012, 55, 4955-4967.

Kimura Y. et al. Brain and Whole-Body Imaging in Rhesus Monkeys of ^{11}C-NOP-1A, a Promising PET Radioligand for Nociceptin/Orphanin FQ Peptide Receptors, J. Nucl. Med. 2011, 52, 1638-1645.

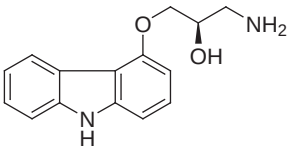
Product Number	Product	Order number / Unit
2480	**(R)-Methyl-FPSPPA** **Reference standard for (R)-[^{11}C]-Methyl-FPSPPA** **2-[(2-Fluorophenyl)methyl]-3-(2-fluorospiro[4,5-dihydrothieno [2,3-c]pyran-7,40-piperidine]-10-yl)propanamide** $C_{22}H_{26}F_2N_2O_2S$ **Molar Mass:** 420.52 [1283095-73-7] White solid packaged in dark glass vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** Spiro[piperidine-4,7'-[7H]thieno[2,3-c]pyran]-1-propanamide, 2'-fluoro-α-[(2-fluorophenyl)methyl]-4',5'-dihydro-N-methyl-, (αR)- **Synonymes:** (2R)-2-[(2-Fluorophenyl)methyl]-3-(2-fluorospiro[4,5-dihydrothieno [2,3-c]pyran-7,40-piperidine]-10-yl)-N-methyl-propanamide	**2480.0020: 20 mg per vial** **Please inquire for customized filling and bulk quantities.** 

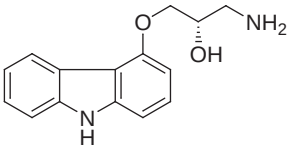
Literature:

Pike V. et al. Synthesis and Evaluation of Radioligands for Imaging Brain Nociceptin/Orphanin FQ Peptide (NOP) Receptors with Positron Emission Tomography, J. Med. Chem. 2011, 54, 2687-2700.

Pedregal C. et al. Development of LC-MS/MS-Based Receptor Occupancy Tracers and Positron Emission Tomography Radioligands for the Nociceptin/Orphanin FQ (NOP) Receptor, J. Med. Chem. 2012, 55, 4955-4967.

Kimura Y. et al. Brain and Whole-Body Imaging in Rhesus Monkeys of ^{11}C-NOP-1A, a Promising PET Radioligand for Nociceptin/Orphanin FQ Peptide Receptors, J. Nucl. Med. 2011, 52, 1638-1645.

Product Number	Product	Order number / Unit
2500	**(R)-Desisopropylcarazolol** **Precursor for (R)-[^{11}C]Carazolol** $C_{15}H_{16}N_2O_2$ **Molar Mass:** 256.3 [143412-41-3] Colourless or nearly colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: 2-Propanol, 1-amino-3-(9H-carbazol-4-yloxy)- (R) **Synonymes:** (R)-1-amino-3-(9H-carbazol-4-yloxy)-2-propanol **Literature:** Berridge M.S. et al. Preparation and In Vivo Binding of [^{11}C]Carazolol, a Radiotracer for the Beta-adrenergic Receptor. Nucl. Med. Biol. 1992, 19, 563-569. Zheng L. et al. Synthesis, Binding Properties, and ^{18}F-Labelling of Fluorocarazolol, a High-Affinity beta-Adrenergic Receptor Antagonist. J. Med. Chem. 1994, 37, 3219-3230. Elsinga P.H. et al. (S,S)- and (S,R)-1´-[^{18}F]Fluorocarazolol, Ligands for the Visualization of Pulmonary beta-Adrenergic Receptors with PET. Nucl. Med. Biol. 1996, 23, 159-167.	**2500.0002: 2 mg per vial** **Please inquire for customized filling and bulk quantities.** 

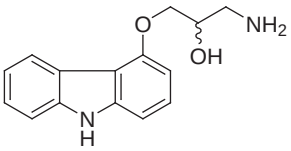
Product Number	Product	Order number / Unit
2510	**(S)-Desisopropylcarazolol** **Precursor for (S)-[^{11}C]Carazolol** $C_{15}H_{16}N_2O_2$ **Molar Mass:** 256.3 [143412-40-2] Colourless or nearly colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: 2-Propanol, 1-amino-3-(9H-carbazol-4-yloxy)- (S) **Synonymes:** (S)-1-amino-3-(9H-carbazol-4-yloxy)-2-propanol **Literature:** Berridge M.S. et al. Preparation and in Vivo Binding of [^{11}C]Carazolol, a Radiotracer for the Beta-adrenergic Receptor. Nucl. Med. Biol. 1992, 19, 563-569. Zheng L. et al. Synthesis, Binding Properties, and ^{18}F-Labelling of Fluorocarazolol, a High-Affinity beta-Adrenergic Receptor Antagonist. J. Med. Chem. 1994, 37, 3219-3230. Elsinga P.H. et al. (S,S)- and (S,R)-1´-[^{18}F]Fluorocarazolol, Ligands for the Visualization of Pulmonary beta-Adrenergic Receptors with PET. Nucl. Med. Biol. 1996, 23, 159-167.	**2510.0002: 2 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2511	**(R,S)-Desisopropylcarazolol** **Precursor for (R,S)-[^{11}C]Carazolol**	**2511.0002: 2 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_{15}H_{16}N_2O_2$ **Molar Mass:** 256.3

[72955-96-5]

Colourless or nearly colourless solid packaged in dark glass crimp cap vials.



Purity: > 95 %

Certificates:
CoA; ^{1}H and ^{13}C NMR spectra

Chemical Name:
CA index name: 2-Propanol, 1-amino-3-(9H-carbazol-4-yloxy)-

Synonymes:
1-amino-3-(9H-carbazol-4-yloxy)-2-propanol

Literature:

Berridge M.S. et al. Preparation and in Vivo Binding of [^{11}C]Carazolol, a Radiotracer for the Beta-adrenergic Receptor. Nucl. Med. Biol. 1992, 19, 563-569.

Zheng L. et al. Synthesis, Binding Properties, and ^{18}F-Labelling of Fluorocarazolol, a High-Affinity beta-Adrenergic Receptor Antagonist. J. Med. Chem. 1994, 37, 3219-3230.

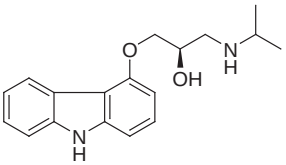
Elsinga P.H. et al. (S,S)- and (S,R)-1´-[^{18}F]Fluorocarazolol, Ligands for the Visualization of Pulmonary beta-Adrenergic Receptors with PET. Nucl. Med. Biol. 1996, 23, 159-167.

Product Number	Product	Order number / Unit
2520	**(R)-Carazolol** **Reference standard for (R)-[^{11}C]Carazolol**	**2520.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_{18}H_{22}N_2O_2$ **Molar Mass:** 298.38

[78859-34-4]

Yellowish solid packaged in dark glass screw cap vials.



Purity: > 95 %

Certificates:
CoA; ^{1}H and ^{13}C NMR spectra

Chemical Name:
CA index name: 2-Propanol,
1-(9H-carbazol-4-yloxy)-3-[(1-methylethyl)amino], (2R)

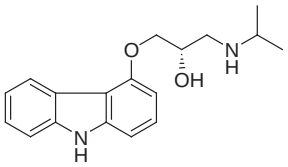
Synonymes:
(R)-4-(2-Hydroxy-3-isopropylamino-propoxy)-carbazole;
(R)-1-(Carbazol-4-yloxy)-3-(isopropylamino)-2-propanol;
(+)-Carazolol

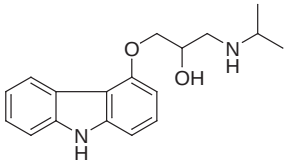
Literature:

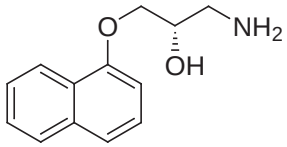
Berridge M.S. et al. Preparation and in Vivo Binding of [^{11}C]Carazolol, a Radiotracer for the Beta-adrenergic Receptor. Nucl. Med. Biol. 1992, 19, 563-569.

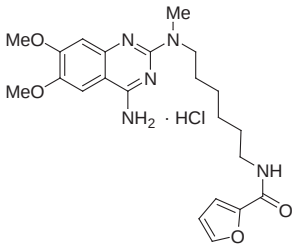
Zheng L. et al. Synthesis, Binding Properties, and ^{18}F-Labelling of Fluorocarazolol, a High-Affinity beta-Adrenergic Receptor Antagonist. J. Med. Chem. 1994, 37, 3219-3230.

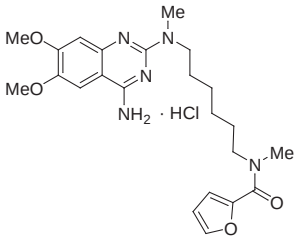
Elsinga P.H. et al. (S,S)- and (S,R)-1´-[^{18}F]Fluorocarazolol, Ligands for the Visualization of Pulmonary beta-Adrenergic Receptors with PET. Nucl. Med. Biol. 1996, 23, 159-167.

Product Number	Product	Order number / Unit
2530	**(S)-Carazolol** **Reference standard for (S)-[^{11}C]Carazolol** $C_{18}H_{22}N_2O_2$ **Molar Mass:** 298.38 [78859-33-3] Yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: 2-Propanol, 1-(9H-carbazol-4-yloxy)-3-[(1-methylethyl)amino] (2S) **Synonymes:** (S)-4-(2-Hydroxy-3-isopropylamino-propoxy)-carbazole; (S)-1-(Carbazol-4-yloxy)-3-(isopropylamino)-2-propanol; (-)-Carazolol **Literature:** Berridge M.S. et al. Preparation and in Vivo Binding of [^{11}C]Carazolol, a Radiotracer for the Beta-adrenergic Receptor. Nucl. Med. Biol. 1992, 19, 563-569. Zheng L. et al. Synthesis, Binding Properties, and ^{18}F-Labelling of Fluorocarazolol, a High-Affinity beta-Adrenergic Receptor Antagonist. J. Med. Chem. 1994, 37, 3219-3230. Elsinga P.H. et al. (S,S)- and (S,R)-1´-[^{18}F]Fluorocarazolol, Ligands for the Visualization of Pulmonary beta-Adrenergic Receptors with PET. Nucl. Med. Biol. 1996, 23, 159-167.	**2530.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2540	**(R,S)-Carazolol** **Reference standard for [^{11}C]Carazolol** $C_{18}H_{22}N_2O_2$ **Molar Mass:** 298.38 [57775-29-8] Yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: 2-Propanol, 1-(9H-carbazol-4-yloxy)-3-[(1-methylethyl)amino], **Synonymes:** 4-(2-Hydroxy-3-isopropylamino-propoxy)-carbazole; 1-(Carbazol-4-yloxy)-3-(isopropylamino)-2-propanol; (±)-Carazolol **Literature:** Berridge M.S. et al. Preparation and In Vivo Binding of [^{11}C]Carazolol, a Radiotracer for the Beta-adrenergic Receptor. Nucl. Med. Biol. 1992, 19, 563-569. Zheng L. et al. Synthesis, Binding Properties, and ^{18}F-Labelling of Fluorocarazolol, a High-Affinity beta-Adrenergic Receptor Antagonist. J. Med. Chem. 1994, 37, 3219-3230. Elsinga P.H. et al. (S,S)- and (S,R)-1´-[^{18}F]Fluorocarazolol, Ligands for the Visualization of Pulmonary beta-Adrenergic Receptors with PET. Nucl. Med. Biol. 1996, 23, 159-167.	**2540.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2550	**(S)-N-Desisopropylpropranolol** **Precursor for [^{11}C] and [^{18}F]Propranolol** **Metabolite of Propranolol** $C_{13}H_{15}NO_2$ **Molar Mass:** 217.26 [88547-38-0] Colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 1-Amino-3-(naphthalen-1-yloxy)-propan-2-ol, (S) **Synonymes:** 1-Amino-3-(1-naphthalenyloxy)propan-2-ol **Literature:** Tewson T.J. et al. Synthesis and biodistribution of R- and S-isomers of [^{18}F]-fluoropropranolol, a lipophilic ligand for the beta-adrenergic receptor. Nucl. Med. Biol. 1999, 26, 891-896.	**2550.0005: 5 mg per vial** **2550.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2570	**GB 99** **Precursor for [^{11}C]GB 67** $C_{22}H_{29}N_5O_4 \cdot HCl$ **Molar Mass:** 463.96 [116784-78-2] Colourless crystals packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: 2-Furancarboxamide, N-[6-[(4-amino-6,7-dimethoxy-2-quinazolinyl)methylamino]hexyl]-, monohydrochloride **Synonymes:** GB 99 hydrochloride salt; N-[6-[(4-amino-6,7-dimethoxy-2-quinazolinyl)methylamino]hexyl]-2-furancarboxamide, hydrochloride salt **Literature:** Riemann B. et al. Radioligands for imaging myocardial α- and β-adrenoceptors. Nuklearmedizin 2003, 42, 4-9. Pike V. et al. Selection, design and evaluation of new radioligands for PET studies of cardiac adrenoceptors. Pharm. Acta Helv. 2000, 74, 191-200.	**2570.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2580	**GB 67** **Reference standard for [^{11}C]GB 67** $C_{23}H_{31}N_5O_4 \cdot HCl$ **Molar Mass:** 477.98 [116784-70-4] Colourless crystals packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 2-Furancarboxamide, N-[6-[(4-amino-6,7-dimethoxy-2-quinazolinyl)methylamino]hexyl]-N-methyl-, monohydrochloride **Synonymes:** GB 67 hydrochloride salt; N-[6-[(4-amino-6,7-dimethoxy-2-quinazolinyl)methylamino]hexyl]-N-methyl-2-furancarboxamide, hydrochloride salt **Literature:** Riemann B. et al. Radioligands for imaging myocardial α- and β-adrenoceptors. Nuklearmedizin 2003, 42, 4-9. Law M. P. et al. Evaluation of [^{11}C]GB 67, a novel radioligand for imaging myocardial α1-adrenoreceptors with positron emission tomography. Eur. J. Nucl. Med. 2000, 27, 7-17. Pike V. et al. Selection, design and evaluation of new radioligands for PET studies of cardiac adrenoceptors. Pharm. Acta Helv. 2000, 74, 191-200. Osman S. et al. Evaluation of the Prospective α1-adrenoreceptor Radioligand, [^{11}C]GB67, in Human Volunteers - Myocardial Uptake and Assessment of Radioactive Metabolites in Plasma. J. Labelled Compd. Radiopharm. 1999, 42, S22-S24.	**2580.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2590	**(S)-1-(2-Amino-3-nitrophenoxy)-3-tert-butylamino-propan-2-ol** **Precursor for [^{11}C]CGP 12177**	**2590.0005: 5 mg per vial** **2590.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_{13}H_{21}N_3O_4$ **Molar Mass:** 283.32

[132059-12-2]

Yellowish solid packaged in dark glass crimp cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H and ^{13}C NMR spectra

Chemical Name:
CA index name: 2-Propanol,
1-(2-amino-3-nitrophenoxy)-3-[(1,1-dimethylethyl)amino]-, (S)-

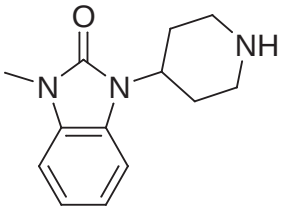
Synonymes:
n/a

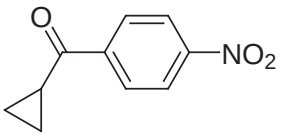
Literature:

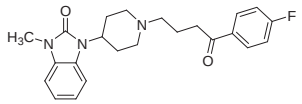
Hammadi A. et al. Asymmetric synthesis of (2S)-and (2R)-4-(3-tert-butylamino-2-hydroxypropoxy)benzimidazol-2-[^{11}C]-one ((S)-and (R)-[^{11}C]-CGP 12177) from optically active precursors J. Labelled Compd. Radiopharm. 1991, 29, 681-690.

Merlet P. et al. Positron emission tomography with ^{11}C CGP-12177 to assess beta-adrenergic receptor concentration in idiopathic dilated cardiomyopathy. Circulation 1993, 87, 1169-1178.

Nishijima K. et al. Preparation and pharmaceutical evaluation for clinical application of high specific activity S-(-)-[^{11}C]CGP-12177, a radioligand for [beta]-adrenoreceptors. Nucl. Med. Commun. 2004, 25, 845-849.

Product Number	Product	Order number / Unit
2700	**4-(2-Keto-3-methyl-1-benzimidazolinyl)piperidine** **Precursor for [^{18}F]NMB ([^{18}F]-(3-N-Methyl)Benperidol)** $C_{13}H_{17}N_3O$ **Molar Mass:** 231.14 [53786-10-0] Yellowish solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 2H-Benzimidazol-2-one, 1,3-dihydro-1-methyl-3-(4-piperidinyl)- **Synonymes:** 1-Methyl-3-(4-piperidyl)-2-benzimidazolinone; KMBP **Literature:** Moerlein S.M. et al. Production of Fluorine-18-Labelled (3-N-Methyl)benperidol for PET Investigation of Cerebral Dopaminergic Receptor Binding. Int. J. Rad. Appl. Instrum. A 1992, 43, 913-917.	**2700.0005: 5 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2750	**Cyclopropyl-p-nitrophenyl ketone** **Precursor for [^{18}F]-labelled building block for different alkylbenzenes (fluorine-18-labelled haloperidol, spiperone, N-(p-nitrobenzyl)spiperone, N-methyl-spiroperidol, BMY14802, 3-N-methyl-benperidol, benperidol)** $C_{10}H_9NO_3$ **Molar Mass:** 191.18 [93639-12-4] Pale yellow needles packaged in dark glass crimp cap vials. **Purity:** > 99 % **Certificates:** CoA; ^{1}H NMR spectrum; HPLC **Chemical Name:** CA index name: Methanone, cyclopropyl-(4-nitrophenyl)- **Synonymes:** n/a **Literature:** Hashizume K. et al. Rapid and efficient synthesis of high-purity fluorine-18 labeled haloperidol and spiperone via the nitro precursor in combination with a new HPLC separation method. Bull. Chem. Soc. Jpn. 1997, 70, 681-687. Mach R. H. et al. Synthesis and in vivo evaluation of [^{18}F]-N-(p-nitrobenzyl)spiperone ([^{18}F]PNBS) in rats. Nucl. Med. Biol. 1993, 20, 269-278. Moerlein S.M. et al. Production of fluorine-18-labeled (3-N-methyl)benperidol for PET investigation of cerebral dopaminergic receptor binding. Int. J. Rad. Appl. Instrum. A 1992, 43, 913-917. Shiue C. Y. et al. Synthesis of (±)-[^{18}F]BMY14802, its enantiomers and their anatomical distribution in mice. Nucl. Med. Biol. 1993, 20, 625-630.	**2750.0002: 2 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2760	**FNMB** **Reference standard for [^{18}F]NMB ([^{18}F]-(3-N-Methyl)Benperidol)** $C_{23}H_{26}FN_3O_2$ **Molar Mass:** 395.47 [133066-70-3] Colourless to brown powder packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 2H-benzimidazol-2-one, 1-[1-[4-(4-Fluorophenyl)-4-oxobutyl]-4-piperidinyl]-1,3-dihydro-3-methyl- **Synonymes:** 1-[3-(4´-fluorobenzoyl)propyl]-4-(2-keto-3-methyl-1-benzimidazolinyl)piperidine); N-Methylbenperidol	**2760.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

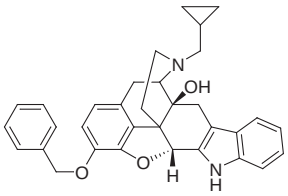
Shiue C.-Y. et al. Syntheses and Specific Activity Determinations of No-Carrier-Added Fluorine-18-Labeled Neuroleptic Drugs J. Nucl. Med. 1985, 26, 181-186.

Suehiro M. et al. In Vivo Labeling of the Dopamine D2 Receptor with N-^{11}C-Methyl-Benperidol J. Nucl. Med. 1990, 31, 2015-2021.

Moerlein S.M. et al. Production of fluorine-18-labeled (3-N-methyl)benperidol for PET investigation of cerebral dopaminergic receptor binding. Int. J. Rad. Appl. Instrum. A 1992, 43, 913-917.

Moerlein S.M. et al. Radiation Dosimetry of [^{18}F](N-Methyl)Benperidol as Determined by Whole-Body PET Imaging of Primates Nucl. Med. Biol. 1997, 24, 311-318.

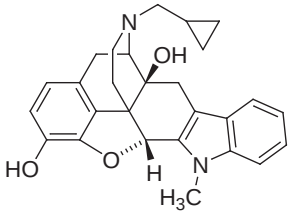
Nikolaus S. et al. In Vivo Measurement of D2 Receptor Density and Affinity for ^{18}F-(3-N-Methyl)Benperidol in the Rat Striatum with a PET System for Small Laboratory Animals J. Nucl. Med. 2003, 44, 618-624.

Product Number	Product	Order number / Unit
2800	**3-O-Benzyl-naltrindole** **Precursor for N1´([^{11}C]Methyl)-naltrindole** **Highly selective antagonist for δ opioid receptors** $C_{33}H_{32}N_2O_3$ **Molar Mass:** 504.62 [161532-22-5] Yellowish solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: 4,8-methanobenzofuro[2,3-a]pyrido[4,3-b]carbazol-8a(9H)-ol, 7-(cyclopropylmethyl)-5,6,7,8,14,14b-hexahydro-1-(phenylmethoxy-), (8R-(4bS*, 8a, 8a.beta,14b.beta)]; **Synonymes:** 3-BNTI; 17-(Cyclopropylmethyl)-6,7-dehydro-4,5α-epoxy-3-benzyloxy-14-hydroxy-6,7,2´,3´-indolomorphinan	**2800.0001: 1 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Madar I. et al. Imaging of δ- and μ-Opioid Receptors in Temporal Lobe Epilepsy by Positron Emission Tomography. Annals of Neurology 1997, 41, 358-367.

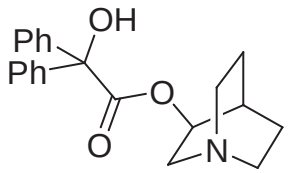
Lever J.R. et al. Synthesis of N1´-([^{11}C]methyl)naltrindole ([^{11}C]MeNTI): A radioligand for positron emission tomographic studies of δ opioid receptors. J. Labelled Compd. Radiopharm. 1995, 36, 137-145.

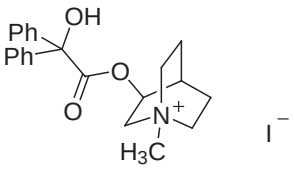
Product Number	Product	Order number / Unit
2810	**N-Methylnaltrindole** **Reference standard for N1´([^{11}C]Methyl)-naltrindole** **Highly selective antagonist for δ opioid receptors** $C_{27}H_{28}N_2O_3$ **Molar Mass:** 428.52 [111555-57-8] Yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: 4,8-methanobenzofuro[2,3-a]pyrido[4,3-b]carbazole-1,8a (9H)-diol, 7-(cyclopropylmethyl)-5,6,7,8,14,14b-hexahydro-14-methyl-, (4bS,8R,8aS,14bR)- **Synonymes:** MeNTI; 4,8-methanobenzofuro[2,3-a]pyrido[4,3-b]carbazole-1,8a (9H)-diol, 7-(cyclopropylmethyl)-5,6,7,8,14,14b-hexahydro-14-methyl-, [8R-(4bS, 8.α., 8a.beta., 14b.beta.)]; (5R,9R,13S,14S)-17-(cyclopropylmethyl)-6,7-dehydro-4,5.α.-epoxy-3,14-dihydroxy-N1´-methyl-6,7,2´,3´-indolomorphinan	**2810.0005: 5 mg per vial** **2810.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

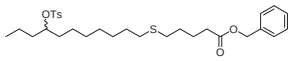
Literature:

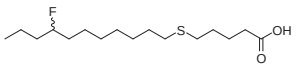
Madar I. et al. Imaging of δ- and μ-Opioid Receptors in Temporal Lobe Epilepsy by Positron Emission Tomography. Annals of Neurology 1997, 41, 358-367.

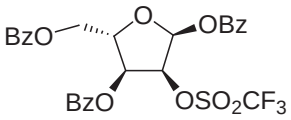
Lever J.R. et al. Synthesis of N1´-([^{11}C]methyl)naltrindole ([^{11}C]MeNTI): A radioligand for positron emission tomographic studies of δ opioid receptors. J. Labelled Compd. Radiopharm. 1995, 36, 137-145.

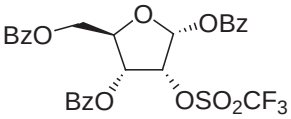
Product Number	Product	Order number / Unit
2830	**QNB** **Precursor for [^{11}C]Me-QNB ([^{11}C]N-methyl-quinuclidin-3-yl benzilate)** $C_{21}H_{23}NO_3$ **Molar Mass:** 337.41 [6581-06-2] Colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Benzeneacetic acid, α-hydroxy-α-phenyl-, 1-azabicyclo[2.2.2]oct-3-yl ester **Synonymes:** 3-Quinuclidinol, benzilate (ester); Benzilic acid, 3-quinuclidinyl ester; β-Quinuclidinyl benzilate; 3-Hydroxyquinuclidine benzilate; 3-Oxyquinuclidine benzilate; 3-Quinuclidinol benzilate; 3-Quinuclidinyl benzilate; 3-Quinuclidyl benzilate; NSC 173698; Ro 2-3308 **Literature:** Dolle F. et al. Highly efficient synthesis of [^{11}C]Me-QNB, a selective radioligand for the quantification of the cardiac muscarinic receptors using PET. J. Labelled Compd. Radiopharm. 2001, 44, 337-334.	**2830.0001: 1 mg per vial** **Please inquire for customized filling and bulk quantities.** 

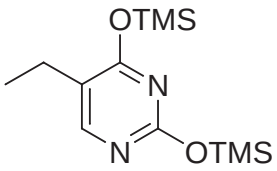
Product Number	Product	Order number / Unit
2840	**Me-QNB** **Reference standard for [^{11}C]Me-QNB ([^{11}C]N-methyl-quinuclidin-3-yl benzilate)** $C_{22}H_{26}INO_3$ **Molar Mass:** 479.35 [71861-83-1] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 1-Azoniabicyclo[2.2.2]octane, 3-[(hydroxydiphenylacetyl)oxy]-1-methyl-, iodide **Synonymes:** n/a **Literature:** Dolle F. et al. Highly efficient synthesis of [^{11}C]Me-QNB, a selective radioligand for the quantification of the cardiac muscarinic receptors using PET. J. Labelled Compd. Radiopharm. 2001, 44, 337-334.	**2840.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

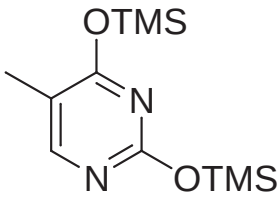
Product Number	Product	Order number / Unit
2850	**Benzyl-14-(R,S)-tosyloxy-6-thiaheptadecanoate** **Precursor for [^{18}F]FTHA (14-(R,S)-[^{18}F]Fluoro-6-thia-heptadecanoic acid)** $C_{30}H_{44}O_5S_2$ **Molar Mass:** 548.79 [137564-70-6] Yellowish oil packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: Pentanoic acid, 5-[[8-[[(4-methylphenyl)sulfonyl]oxy]undecyl]thio]-phenylmethyl ester ± **Synonymes:** 14-(R,S)-Tosyloxy-6-thiaheptadecanoic acid benzyl ester **Literature:** DeGrado T.R. et al. Synthesis of 14-(R,S)-[^{18}F]fluoro-6-thia-heptadecanoic acid. J. Labelled Compd. Radiopharm. 1991, 29, 989-995. DeGrado T.R. et al. 14(R,S)-[^{18}F]fluoro-6-thia-heptadecanoic acid (FTHA): evaluation in mouse of a new probe of myocardial utilization of a long chain fatty acids. J. Nucl. Med. 1991, 32, 1888-1896. Maeki M.T. et al. Free Fatty Acid Uptake in the Myocardium and Skeletal Muscle Using Fluorine-18-Fluoro-6-Thiaheptadecanoic Acid. J. Nucl. Med. 1998, 39, 1320-1327. Taylor M. et al. An Evaluation of Myocardial Fatty Acid and Glucose Uptake Using PET with [^{18}F]Fluoro-6-Thia-Heptadecanoic Acid and [^{18}F]FDG in Patients with Congestive Heart Failure. J. Nucl. Med. 2001, 42, 55-62.	**2850.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

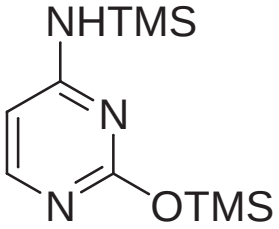
Product Number	Product	Order number / Unit
2860	**14-(R,S)-Fluoro-6-thiaheptadecanoic acid** **Reference standard for [^{18}F]FTHA (14-(R,S)-[^{18}F]Fluoro-6-thia-heptadecanoic acid)** $C_{16}H_{31}FO_2S$ **Molar Mass:** 306.48 [137564-72-8] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: Pentanoic acid, 5-[(8-fluoroundecyl)thio]- **Synonymes:** 14-Fluoro-6-thiaheptadecanoic acid; FTHA **Literature:** DeGrado T.R. et al. Synthesis of 14-(R,S)-[^{18}F]fluoro-6-thia-heptadecanoic acid. J. Labelled Compd. Radiopharm. 1991, 29, 989-995. DeGrado T.R. et al. 14(R,S)-[^{18}F]fluoro-6-thia-heptadecanoic acid (FTHA): evaluation in mouse of a new probe of myocardial utilization of a long chain fatty acids. J. Nucl. Med. 1991, 32, 1888-1896. Maeki M.T. et al. Free Fatty Acid Uptake in the Myocardium and Skeletal Muscle Using Fluorine-18-Fluoro-6-Thiaheptadecanoic Acid. J. Nucl. Med. 1998, 39, 1320-1327. Taylor M. et al. An Evaluation of Myocardial Fatty Acid and Glucose Uptake Using PET with [^{18}F]Fluoro-6-Thia-Heptadecanoic Acid and [^{18}F]FDG in Patients with Congestive Heart Failure. J. Nucl. Med. 2001, 42, 55-62.	**2860.0002: 2 mg per vial** **Please inquire for customized filling and bulk quantities.** 

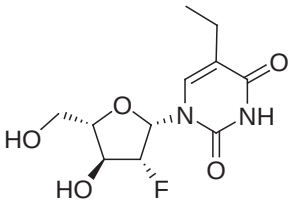
Product Number	Product	Order number / Unit
2869	**2-O-(Trifluoromethylsulfonyl)-1,3,5-tri-O-benzoyl-α-L-ribofuranose** **Precursor 1 for [^{18}F]L-FEAU and [^{18}F]L-FMAU** $C_{27}H_{21}F_3O_{10}S$ **Molar Mass:** 594.51 [339091-18-8] Colourless foam or solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: α-L-Ribofuranose, 1,3,5-tribenzoate 2-(trifluoro-methanesulfonate) **Synonymes:** 1,3,5-Tri-O-benzoyl-2-O-(trifluoromethanesulfonyl)-α-L-ribofuranose; (2-O-(Trifluoromethylsulfonyl)-1,3,5-tri-O-benzoyl-α-L-ribofuranose) [^{18}F]L-FEAU = 2´-[^{18}F]Fluoro-5-ethyl-1-β-L-arabinofuranosyluracil [^{18}F]L-FMAU = 2´-deoxy-2´-[^{18}F]Fluoro-5-methyl-1-β-L-arabinofuranosyluracil **Literature:** Alauddin M.M. et al. Radiosynthesis of 2´-deoxy-2´-[^{18}F]-fluoro-5-methyl-1-β-L-arabinofuranosyluracil ([^{18}F]-L-FMAU) for PET. Appl. Radiat. Isot. 2007, 65, 941-946. Alauddin M.M. et al. Evaluation of 2´-deoxy-2´-[^{18}F]fluoro-5-methyl-1-β-L-arabinofuranosyluracil ([^{18}F]-L-FMAU) as a PET imaging agent for cellular proliferation: comparison with [^{18}F]-D-FMAU and [^{18}F]FLT. Eur. J. Nucl. Mol. Imaging, 2008, 35, 990-998.	**2869.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

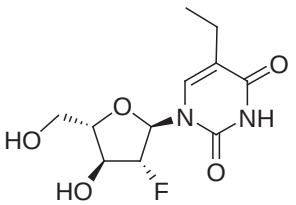
Product Number	Product	Order number / Unit
2870	**2-O-(Trifluoromethylsulfonyl)-1,3,5-tri-O-benzoyl-α-D-ribofuranose** **Precursor 1 for [^{18}F]FEAU and [^{18}F]FMAU** **(FEAU = 2´-Fluoro-5-ethyl-1-β-D-arabinofuranosyluracil** **FMAU =** **2´-deoxy-2´-Fluoro-5-methyl-1-β-D-arabinofuranosyluracil)** $C_{27}H_{21}F_3O_{10}S$ **Molar Mass:** 594.51 [97614-41-0] Colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: α-D-Ribofuranose, 1,3,5-tribenzoate 2-(trifluoro-methanesulfonate) **Synonymes:** 1,3,5-Tri-O-benzoyl-2-O-(trifluoromethanesulfonyl)-α-D-ribofuranose; (2-O-(Trifluoromethylsulfonyl)-1,3,5-tri-O-benzoyl-α-D-ribofuranose) **Literature:** Blasberg R.G. et al. Synthesis and Evaluation of [^{18}F] Labeled Pyrimidine Nucleosides for Positron Emission Tomography Imaging of Herpes Simplex Virus 1 Thymidine Kinase Gene Expression. J. Med. Chem. 2006, 49, 5377-5381. Alauddin M.M. et al. Synthesis and evaluation of 2´-deoxy-2´-^{18}F-fluoro-5-fluoro-1-beta-D-arabinofuranosyluracil as a potential PET imaging agent for suicide gene expression. J. Nucl. Med. 2004, 45, 2063-2069. Alauddin M.M. et al. Stereospecific fluorination of 1,3,5-tri-O-benzoyl-a-D-ribofuranose-2-sulfonate esters: preparation of a versatile intermediate for synthesis of 2´-[^{18}F]-fluoro-arabinonucleosides. J. Fluorine Chem. 2000, 106, 87-9	**2870.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

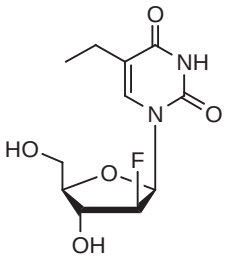
Product Number	Product	Order number / Unit
2871	**5-Ethyl-2,4-bis[(trimethylsilyl)oxy]pyrimidine** **Precursor 2 for [^{18}F]FEAU** **(2´-[^{18}F]Fluoro-5-ethyl-1-β-D-arabinofuranosyluracil)** Caution, very sensitive to moisture! $C_{12}H_{24}N_2O_2Si$ **Molar Mass:** 284.5 [31167-05-2] Colourless oil packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: Pyrimidine, 5-ethyl-2,4-bis[(trimethylsilyl)oxy]- **Synonymes:** 2,4-Bis(trimethylsiloxy)-5-ethylpyrimidine; 2,4-Bis(trimethylsilyl)-5-ethyluracil **Literature:** Buursma A.R. et al. ^{18}F-FEAU as a radiotracer for herpes simplex virus thymidine kinase gene expression: in-vitro comparison with other PET tracers. Nucl. Med. Commun. 2006, 27, 25-30.	**2871.0050: 50 mg per vial** **Please inquire for customized filling and bulk quantities.** 

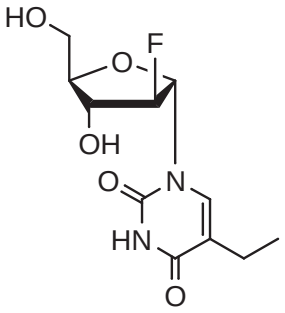
Product Number	Product	Order number / Unit
2872	**5-Methyl-2,4-bis[(trimethylsilyl)oxy]pyrimidine** **Precursor 2 for [^{18}F]FMAU** **(2´-deoxy-2´-[^{18}F]fluoro-5-methyl-1-β-D-arabinofuranosyluracil)** Caution, very sensitive to moisture! $C_{11}H_{22}N_2O_2Si$ **Molar Mass:** 270.48 [7288-28-0] Colourless solid or liquid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: Pyrimidine, 5-methyl-2,4-bis[(trimethylsilyl)oxy]- **Synonymes:** 2,4-Bis(trimethylsiloxy)-5-methylpyrimidine; 2,4-Bis(trimethylsilyl)-5-methyluracil; 2,4-Bis-O-(trimethylsilyl)thymine; O,O´-Bis(trimethylsilyl)thymine; Bis(O-trimethylsilyl)thymine **Literature:** Mangner T.J. et al. Synthesis of 2´-deoxy-2´-[^{18}F]fluoro-beta-D-arabinofuranosyl nucleosides, [^{18}F]FAU, [^{18}F]FMAU, [^{18}F]FBAU, [^{18}F]FIAU, as potential PET agents for imaging cellular proliferation. Nucl. Med. Biol. 2003, 30, 215-224. Buursma A.R. et al. ^{18}F-FEAU as a radiotracer for herpes simplex virus thymidine kinase gene expression: in-vitro comparison with other PET tracers. Nucl. Med. Commun. 2006, 27, 25-30. Alauddin M.M. et al. Direct comparison of radiolabeled probes FMAU, FHBG, and FHPG as PET imaging agents for HSV1-tk expression in a human breast cancer model. Mol. Imaging 2004, 3, 76-84. Alauddin M.M. et al. Synthesis and evaluation of 2´-deoxy-2´-^{18}F-fluoro-5-fluoro-1-beta-D-arabinofuranosyluracil as a potential PET imaging agent for suicide gene expression. J. Nucl. Med. 2004, 45, 2063-2069	**2872.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

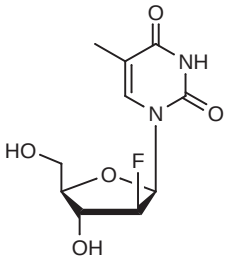
Product Number	Product	Order number / Unit
2873	**Bis(trimethylsilyl)cytosine** **Precursor 2 for [^{18}F]FAC (1-(2´-deoxy-2´- [^{18}F]fluoroarabinofuranosyl)cytosine)** $C_{10}H_{21}N_3OSi$ **Molar Mass:** 255.46 [18037-10-0] Colourless solid packaged in dark glass crimp cap vials. **Purity:** $\geq$ 90 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 4-Pyrimidinamine, N-(trimethylsilyl)-2-[(trimethylsilyl)oxy]- **Synonymes:** Trimethylsilanyl-(2-trimethylsilanyloxy-pyrimidin-4-yl)-amine; N-(Trimethylsilyl)-2-[(trimethylsilyl)oxy]pyrimidin-4-amine; N-(trimethylsilyl)-2-[(trimethylsilyl)oxy]-4-pyrimidinamin;N-(Trimethylsilyl)-2-[(trimethylsilyl)oxy]-4-pyrimidinamine; Pyrimidine, 2-(trimethylsiloxy)-4-[(trimethylsilyl)amino]-; N-(trimethylsilyl)-2-[(trimethylsilyl)oxy]pyrimidin-4-amine; BTMSC; Pyrimidine, 2-(trimethylsiloxy)-4-[(trimethylsilyl)amino]-; 2,4-Bis(trimethylsilyl)cytosine; O,N-Bis(trimethylsilyl)cytosine **Literature:** Radu C.G. et al. Molecular imaging of lymphoid organs and immune activation by positron emission tomography with a new [^{18}F]-labeled 2´-deoxycytidine analog. Nature Medicine 2008, 14, 783-788.	**2873.0060: 60 mg per vial** **Please inquire for customized filling and bulk quantities.** 

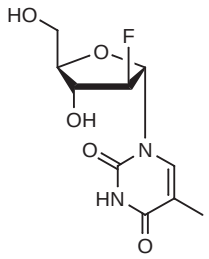
Product Number	Product	Order number / Unit
2874	**L-FEAU** **Reference standard for [^{11}C]L-FEAU and [^{18}F]L-FEAU (2´-[^{18}F]Fluoro-5-ethyl-1-β-L-arabinofuranosyluracil)** $C_{11}H_{15}FN_2O_5$ **Molar Mass:** 274.25 [171720-95-9] Colourless foam or solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 2,4(1H,3H)-Pyrimidinedione, 1-(2-deoxy-2-fluoro-β-L-arabinofuranosyl)-5-ethyl- **Synonymes:** 1-(2-Deoxy-2-fluoro-β-L-arabinofuranosyl)-5-ethyluracil; 1-(2-Deoxy-2-fluoro-β-L-arabinofuranosyl)-5-ethyl-2,4(1H,3H)-pyrimidinedione; 1-(2-Deoxy-2-fluoro-arabinofuranosyl)-5-ethyluracil; 2´-Fluoro-5-ethyl-arabinosyluracil; 2´-Fluoro-5-ethyl-β-L-arabinofuranosyluracil; 1-[(2S,3R,4S,5S)-3-Fluoro-4-hydroxy-5-(hydroxymethyl)oxolan-2-yl]-5-ethylpyrimidine-2,4-dione; 5-Ethyl-1-[(2S,3R,4S,5S)-3-fluoro-4-hydroxy-5-(hydroxymethyl)oxolan-2-yl]pyrimidine-2,4-dione; 5-Ethyl-1-(2-fluoro-2-deoxy-β-L-arabinofuranosyl)uracil; 1-(2-Deoxy-2-fluoro-β-L-arabinofuranosyl)-5-ethyl-2,4(1H,3H)-pyrimidinedione; β-L-FEAU **Literature:** Ma et al. Structure-Activity Relationships of 1-(2-Deoxy-2-fluoro-β-l-arabino-furanosyl)pyrimidine Nucleosides as Anti-Hepatitis B Virus Agents. J. Med. Chem. 1996, 39, 2835-2843.	**2874.0010: 10 mg per vial** **2874.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

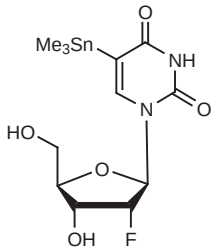
Product Number	Product	Order number / Unit
2875	**α-L-FEAU** **Analytical standard for validation of [^{11}C]L-FEAU and [^{18}F]L-FEAU synthesis (2´-[^{18}F]Fluoro-5-ethyl-1-α-L-arabinofuranosyluracil)** $C_{11}H_{15}FN_2O_5$ **Molar Mass:** 274.25 CAS-RN not yet assigned Colourless foam or solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 2,4(1H,3H)-Pyrimidinedione, 1-(2-deoxy-2-fluoro-α-L-arabinofuranosyl)-5-ethyl- **Synonymes:** 1-(2-Deoxy-2-fluoro-α-L-arabinofuranosyl)-5-ethyluracil; 1-(2-Deoxy-2-fluoro-α-L-arabinofuranosyl)-5-ethyl-2,4(1H,3H)-pyrimidinedione; 2´-Fluoro-5-ethyl-α-L-arabinofuranosyluracil; 5-Ethyl-1-(2-fluoro-2-deoxy-α-L-arabinofuranosyl)uracil; 1-(2-Deoxy-2-fluoro-α-L-arabinofuranosyl)-5-ethyl-2,4(1H,3H)-pyrimidinedione; α-L-FEAU **Literature:** Ma et al. Structure-Activity Relationships of 1-(2-Deoxy-2-fluoro-β-l-arabino-furanosyl)pyrimidine Nucleosides as Anti-Hepatitis B Virus Agents. J. Med. Chem. 1996, 39, 2835-2843.	**2875.0002: 2 mg per vial** **2875.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

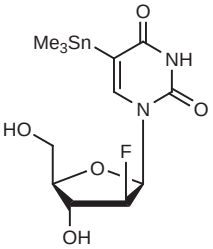
Product Number	Product	Order number / Unit
2876	**FEAU** **Reference standard for [^{11}C]FEAU and [^{18}F]FEAU** **(2´-[^{18}F]Fluoro-5-ethyl-1-β-D-arabinofuranosyluracil)** **(2´-Fluoro-5-[^{11}C]ethyl-1-β-D-arabinofuranosyluracil)** $C_{11}H_{15}FN_2O_5$ **Molar Mass:** 274.25 [83546-42-3] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 2,4(1H,3H)-Pyrimidinedione, 1-(2-deoxy-2-fluoro-β-D-arabinofuranosyl)-5-ethyl- **Synonymes:** 1-(2-Deoxy-2-fluoro-β-D-arabinofuranosyl)-5-ethyluracil; 1-(2-Deoxy-2-fluoro-β-D-arabinofuranosyl)-5-ethyl-2,4(1H,3H)-pyrimidinedione; 1-(2-Deoxy-2-fluoro-arabinofuranosyl)-5-ethyluracil; 2´-Fluoro-5-ethyl-arabinosyluracil; 2´-Fluoro-5-ethyl-β-D-arabinofuranosyluracil; 1-[(2R,3S,4R,5R)-3-Fluoro-4-hydroxy-5-(hydroxymethyl)oxolan-2-yl]-5-ethylpyrimidine-2,4-dione; 5-Ethyl-1-[(2R,3S,4R,5R)-3-fluoro-4-hydroxy-5-(hydroxymethyl)oxolan-2-yl]pyrimidine-2,4-dione; 5-Ethyl-1-(2-fluoro-2-deoxy-β-D-arabinofuranosyl)uracil; 1-(2-Deoxy-2-fluoro-β-D-arabinofuranosyl)-5-ethyl-2,4(1H,3H)-pyrimidinedione; β-FEAU; β-D-FEAU **Literature:** Chou T.C. et al. Synthesis and biological effects of 2´-Fluoro-5-ethyl-1-beta-D-arabinofuranosyluracil. Antimicrob. Agents Chemother. 1987, 31, 1355-1358	**2876.0010: 10 mg per vial** **2876.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

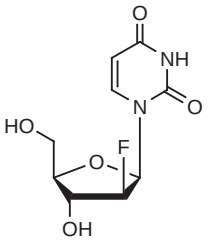
Product Number	Product	Order number / Unit
2877	**αFEAU** **Reference standard for byproduct of [^{11}C]FEAU and [^{18}F]FEAU synthesis** **(2´-[^{18}F]Fluoro-5-ethyl-1-α-D-arabinofuranosyluracil)** **(2´-Fluoro-5-[^{11}C]ethyl-1-α-D-arabinofuranosyluracil)** $C_{11}H_{15}FN_2O_5$ **Molar Mass:** 274.25 CAS-RN not yet assigned Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** 2,4(1H,3H)-Pyrimidinedione, 1-(2-deoxy-2-fluoro-α-D-arabinofuranosyl)-5-ethyl- **Synonymes:** α-FEAU; α-D-FEAU; 1-(2-Deoxy-2-fluoro-α-D-arabinofuranosyl)thymine **Literature:** Chou T.C. et al. Synthesis and biological effects of 2´-Fluoro-5-ethyl-1-beta-D-arabinofuranosyluracil. Antimicrob. Agents Chemother. 1987, 31, 1355-1358	**2877.0001: 1 mg per vial** **2877.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

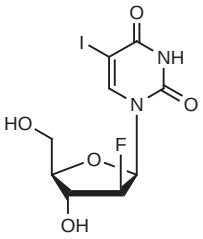
Product Number	Product	Order number / Unit
2878	**FMAU** **Reference standard for [^{18}F]FMAU and [^{11}C]FMAU** $C_{10}H_{13}FN_2O_5$ **Molar Mass:** 260.22 [69256-17-3] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 2,4(1H,3H)-Pyrimidinedione, 1-[2-deoxy-2-fluoro-β-D-arabinofuranosyl]-5-methyl- **Synonymes:** 1-(2-Fluoro-2-deoxy-β-D-arabinofuranosyl)thymine; 1-(2-Deoxy-2-fluoro-β-D-arabinofuranosyl)-5-methyl-2,4(1H,3H)-pyrimidinedione; 1-(2-Deoxy-2-fluoro-β-D-arabinofuranosyl)-5-methyluracil; 2´-Fluoro-5-methyl-arabinosyluracil; 2´-Fluoro-5-methyl-β-D-arabinofuranosyluracil; 1-[(2R,3S,4R,5R)-3-Fluoro-4-hydroxy-5-(hydroxymethyl)oxolan-2-yl]-5-methylpyrimidine-2,4-dione; 5-Methyl-1-[(2R,3S,4R,5R)-3-fluoro-4-hydroxy-5-(hydroxymethyl)oxolan-2-yl]pyrimidine-2,4-dione; 5-Methyl-1-(2-fluoro-2-deoxy-β-D-arabinofuranosyl)uracil; 1-(2-Deoxy-2-fluoro-β-D-arabinofuranosyl)-5-methyl-2,4(1H,3H)-pyrimidinedione; β-FMAU; β-D-FMAU **Literature:** Mangner T.J. et al. Synthesis of 2´-deoxy-2´-[^{18}F]fluoro-beta-D-arabinofuranosyl nucleosides, [^{18}F]FAU, [^{18}F]FMAU, [^{18}F]FBAU, [^{18}F]FIAU, as potential PET agents for imaging cellular proliferation. Nucl. Med. Biol. 2003, 30, 215-224. Alauddin M.M. et al. Direct comparison of radiolabeled probes FMAU, FHBG, and FHPG as PET imaging agents for HSV1-tk expression in a human breast cancer model. Mol. Imaging 2004, 3, 76-84. Alauddin M.M. et al. Synthesis and evaluation of 2´-deoxy-2´-^{18}F-fluoro-5-fluoro-1-beta-D-arabinofuranosyluracil as a potential PET imaging agent for suicide gene expression. J. Nucl. Med. 2004, 45, 2063-2069	**2878.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2879	**αFMAU** **Reference standard for byproduct of [^{18}F]FMAU and [^{11}C]FMAU synthesis (2´-deoxy-2´-fluoro-5-methyl-1-β-D-arabinofuranosyluracil)** $C_{10}H_{13}FN_2O_5$ **Molar Mass:** 260.22 [97672-34-9] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 2,4(1H,3H)-Pyrimidinedione, 1-[2-deoxy-2-fluoro-α-D-arabinofuranosyl]-5-methyl- **Synonymes:** α-FMAU, α-D-FMAU **Literature:** Mangner T.J. et al. Synthesis of 2´-deoxy-2´-[^{18}F]fluoro-beta-D-arabinofuranosyl nucleosides, [^{18}F]FAU, [^{18}F]FMAU, [^{18}F]FBAU, [^{18}F]FIAU, as potential PET agents for imaging cellular proliferation. Nucl. Med. Biol. 2003, 30, 215-224. Alauddin M.M. et al. Direct comparison of radiolabeled probes FMAU, FHBG, and FHPG as PET imaging agents for HSV1-tk expression in a human breast cancer model. Mol. Imaging 2004, 3, 76-84. Alauddin M.M. et al. Synthesis and evaluation of 2´-deoxy-2´-^{18}F-fluoro-5-fluoro-1-beta-D-arabinofuranosyluracil as a potential PET imaging agent for suicide gene expression. J. Nucl. Med. 2004, 45, 2063-2069	**2879.0002: 2 mg per vial** **Please inquire for customized filling and bulk quantities.** 

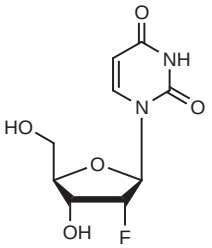
Product Number	Product	Order number / Unit
2880	**FTRU** **Precursor for 5-[^{131}I]Iodo- and 5-[^{211}At]Astato 1-(2-deoxy-2-fluoro-β-D-ribofuranosyl)uracil** **Precursor for [^{76}Br]Bromo-2´-fluoro-2´-deoxyuridine** $C_{12}H_{19}FN_2O_5Sn$ **Molar Mass:** 409.00 [336881-26-6] Colourless crystals packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H, ^{19}F and ^{119}Sn NMR spectra **Chemical Name:** CA index name: 2,4(1H,3H)-Pyrimidinedione, 1(2-deoxy-2-fluoro-β-D-ribofuranosyl)-5-(trimethylstannyl)- **Synonymes:** 2´-Deoxy-2´-fluoro-5-(trimethylstannyl)-uridine; FTAU-epimer **Literature:** Vaidyanathan G. et al. Preparation of 5-[^{131}I]Iodo- and 5-[^{211}At]Astato-1-(2-Deoxy-2-Fluoro-beta-D-Arabinofuranosyl)Uracil by a Halodestannylation Reaction. Nucl. Med. Biol. 1998, 25, 487-496. Lu L. et al. Synthesis of [^{76}Br]Bromfluorodeoxyuridine and Its Validation with Regard to Uptake, DNA Incorporation, and Excretion Modulation in rats. J. Nucl. Med. 2000, 41, 1746-1752.	**2880.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2890	**FTAU** **Precursor for 5-[^{131}I]FIAU and 5-[^{211}At]FAAU** $C_{12}H_{19}FN_2O_5Sn$ **Molar Mass:** 409.00 [213136-14-2] Colourless crystals packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H, ^{19}F and ^{119}Sn NMR spectra **Chemical Name:** CA index name: 2,4(1H,3H)-Pyrimidinedione, 1(2-deoxy-2-fluoro-β-D-arabinofuranosyl)-5-(trimethylstannyl)- **Synonymes:** 5-Trimethylstannyl-1-(2-deoxy-2-fluoro-β-D-arabinofuranosyl)uracil; FTAU **Literature:** Vaidyanathan G. et al. Preparation of 5-[^{131}I]Iodo- and 5-[^{211}At]Astato-1-(2-Deoxy-2-Fluoro-beta-D-Arabinofuranosyl)Uracil by a Halodestannylation Reaction. Nucl. Med. Biol. 1998, 25, 487-496. Vaidyanathan G. et al. Preparation of 5-[^{131}I]Iodo- ([^{131}I]FIAU) and 5-[^{211}At]Astato-1-(2-Deoxy-2-Fluoro-beta-D-Arabinofuranosyl)Uracil ([^{211}At]FAAU) by a Halodestannylation Reaction. XIIth International Symposium on Radiopharmaceutical Chemistry, Uppsala, Sweden, 1997, 91-93.	**2890.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2900	**FAU** **Reference standard for 2´-[^{18}F]FAU** **Precursor for [^{124}I]FIAU, [^{125}I]FIAU** $C_9H_{11}FN_2O_5$ **Molar Mass:** 246.19 [69123-94-0] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 2,4(1H,3H)-Pyrimidinedione, 1-(2-deoxy-2-fluoro-β-D-arabinofuranosyl) **Synonymes:** 2´-Fluoro-2´-deoxyuracyl-β-D-arabinofuranoside; 1-(2-Deoxy-2-fluoro-β-D-arabinofuranosyl)uracil **Literature:** Sterzycki R.Z. et al. Synthesis and Anti-HIV Activity of Several 2´-Fluoro-Containing Pyrimidine Nucleosides. J. Med. Chem. 1990, 33, 2150-2157. Hughes J. A. et al. Preparation of [^{11}C]Thymidine and [^{11}C]2´-Arabino-2´-Fluoro-beta-5-Methyl-Uridine (FMAU) Using a Hollow Fiber Membran Bioreactor System. J. Labelled Compd. Radiopharm. 1995, 36, 1133-1145. Conti P. S. et al. Synthesis of 2´-Fluoro-5-[^{11}C]Methyl-1-beta-D-Arabinofuranosyluracyl ([^{11}C]FMAU): A Potential Nucleoside Analog for In Vivo Study of Cellular Proliferation with PET. Nucl. Med. Biol. 1995, 22, 783-789.	**2900.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2910	**FIAU** **Reference standard for [$^{124/125/131}$I]FIAU** $C_9H_{10}FIN_2O_5$ **Molar Mass:** 372.09 [69123-98-4] Colourless crystals packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 2,4(1H,3H)-Pyrimidinedione, 1-(2-deoxy-2-fluoro-β-D-arabinofuranosyl)-5-iodo- **Synonymes:** Fialuridine; 2´-Fluoro-5-iodouracil; 1-(2´-Deoxy-2´-fluoro-β-D-arabinofuranosyl)-5-iodouracil; 1-(2-Deoxy-2-fluoro-β-D-arabinofuranosyl)-5-iodouracil; 5-Iodo-2´-fluoroarauracil; Fluoroiodoarauracil; NSC 678514 **Literature:** Watanabe K.A. et al. Nucleosides. 110. Synthesis and Antiherpes Virus Activity of Some 2´-Fluoro-2´-deoxyarabinofuranosyl-pyrimidine Nucleosides. J. Med. Chem. 1979, 22, 21-24. Sterzycki R.Z. et al. Synthesis and Anti-HIV Activity of Several 2´-Fluoro-Containing Pyrimidine Nucleosides. J. Med. Chem. 1990, 33, 2150-2157. Hughes J.A. et al. Preparation of [^{11}C]Thymidine and [^{11}C]-2´-Arabino-2´-Fluoro-beta-5-Methyl-Uridine (FMAU) Using a Hollow Fiber Membran Bioreactor System. J. Labelled Compd. Radiopharm. 1995, 36, 1133-1145. Conti P.S. et al. Synthesis of 2´-Fluoro-5-[^{11}C]Metyl-1-beta-D-Arabinofuranosyluracyl ([^{11}C]FMAU): A Potential Nucleoside Analog for In Vivo Study of Cellular Proliferation with PET. Nucl. Med. Biol. 1995, 22, 783-789.	**2910.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2920	**FUdR** **Reference standard for 2´-[^{18}F]FUdR** $C_9H_{11}FN_2O_5$ **Molar Mass:** 246.19 [784-71-4] Colourless powder packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H, ^{13}C and ^{19}F NMR spectra **Chemical Name:** CA index name: Uridine, 2´-deoxy-2´-fluoro- **Synonymes:** 1-(2-Deoxy-2-fluoro-β-D-ribofuranosyl)uracil; 2´-Deoxy-2´-fluorouridine; 2´-Fluoro-2´-deoxy-uridine; 2,4(1H,3H)-Pyrimidinedione, 1-(2-deoxy-2-fluoro-β-D-ribofuranosyl)	**2920.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**



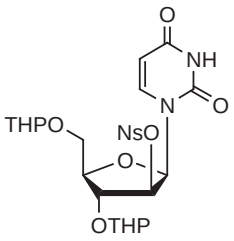
Literature:

Abrams D.N. et al. The Synthesis of Radiolabelled 1-(2´-Fluoro-2´-deoxy-beta-D-ribofuranosyl)uracil and 1-(2´-Chloro-2´-deoxy-beta-D-ribofuranosyl)uracil. Int. J. Appl. Radiat. Isot. 1985, 36, 233-238.

Codington J.F. et al. Nucleosides. XIX. Structure of the 2´-Halogeno-2´-Deoxypyrimidine Nucleosides. J. Org. Chem. 1964, 29, 564-569.

Verheyden J.P.H. et al. Synthesis of Some Pyrimidine 2´-Amino-2´-deoxynucleosides. J. Org. Chem. 1971, 36, 250-254.

Product Number	Product	Order number / Unit
2921	**Di-THP-nosyl-AUR** **Precursor for 2´-Deoxy-2´-[^{18}F]Fluorouridine** $C_{25}H_{31}N_3O_{12}S$ **Molar Mass:** 579.59 [1000816-92-1] Colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** 2,4(1H,3H)-Pyrimidinedione, 1-(2-p-nitrophenylsulfonyloxy-β-D-arabinofuranosyl **Synonymes:** 3´,5´-di-O-tetrahydropyranyl-2´-O-nosyl-1-β-D-arabinofuranosyluracil; 3´,5´-di-O-tetrahydropyranyl-2´-O-p-nitrophenylsulphonyl-1-β-D-arabinofuranosyluracil; 3´,5´-di-O-THP-2´-O-nosyl-AUR	**2921.0010: 10 mg per vial** **2921.0020: 20 mg per vial** **2921.0030: 30 mg per vial** **Please inquire for customized filling and bulk quantities.**



Literature:

Kang S.H. et al. Simple and High radiochemical yield synthesis of 2´-Deoxy-2´-[^{18}F]fluorouridine via a new nosylate precursor. J. Labelled Compd. Radiopharm. 2006, 49, 1237-1246.

Product Number	Product	Order number / Unit
2922	**FIRU** **Reference standard for 5-[$^{123/125}$I]FIRU**	**2922.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_9H_{10}FIN_2O_5$ **Molar Mass:** 372.09

[55612-21-0]

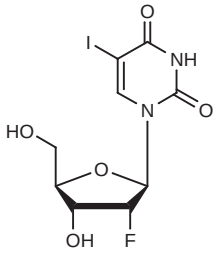
Colourless solid packaged in dark glass screw cap vials.

Purity: > 95 %

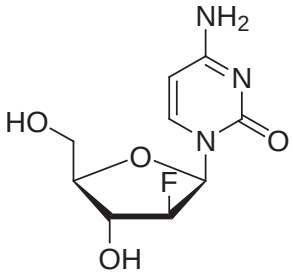
Certificates:
CoA; ^{1}H, ^{13}C and ^{19}F NMR spectra

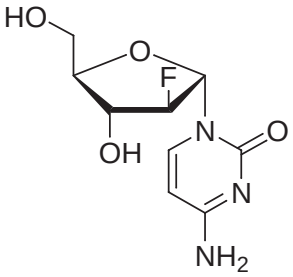
Chemical Name:
CA index name: 2,4(1H,3H)-Pyrimidinedione,
1-(2-deoxy-2-fluoro-β-D-ribofuranosyl)-5-iodo-

Synonymes:
1-(2´-Fluoro-2´-desoxy-β-D-ribofuranosyl)-5-iodouracil;
2´-deoxy-2´-fluoro-5-iodo-uridine

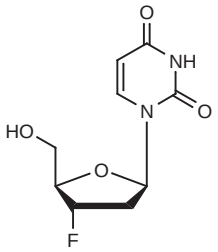


Literature:
Morin K.W. et al. Cytotoxicity and cellular uptake of pyrimidine nucleosides for imaging herpes simplex type-1 thymidine kinase (HSV-1 TK) expression in mammalian cells. Nucl. Med. Biol. 2004, 31, 623-630.

Product Number	Product	Order number / Unit
2930	**FAC** **Reference standard for [^{18}F]FAC** **1-(2´-deoxy-2´-[^{18}F]fluoroarabinofuranosyl)cytosine** $C_9H_{12}FN_3O_4$ **Molar Mass:** 245.21 [56632-83-8] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 2(1H)-Pyrimidinone, 4-amino-1-(2-deoxy-2-fluoro-β-D-arabinofuranosyl)- **Synonymes:** 1-(2´-Deoxy-2´-fluoro-β-D-arabinofuranosyl)cytosine; 4-Amino-1-(2-deoxy-2-fluoro-β-D-arabinofuranosyl)-2(1H)-pyrimidinone; 4-amino-1-[(2R,3S,4R,5R)-3-fluoro-4-hydroxy-5-(hydroxymethyl)oxolan-2-yl]pyrimidin-2-one; 4-Amino-1-(2-deoxy-2-fluoro-β-D-arabinofuranosyl)-2(1H)-pyrimidinone; β-FAC; β-D-FAC **Literature:** Radu C.G. et al. Molecular imaging of lymphoid organs and immune activation by positron emission tomography with a new [^{18}F]-labeled 2´-deoxycytidine analog. Nature Medicine 2008, 14, 783-788.	**2930.0002: 2 mg per vial** **2930.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2931	**αFAC** **Analytical standard for validation of [^{18}F]FAC** **1-(2´-deoxy-2´-[^{18}F]fluoroarabinofuranosyl)cytosine** $C_9H_{12}FN_3O_4$ **Molar Mass:** 245.21 CAS-RN not yet assigned Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** 2(1H)-Pyrimidinone, 4-amino-1-(2-deoxy-2-fluoro-α-D-arabinofuranosyl)- **Synonymes:** 1-(2´-Deoxy-2´-fluoro-α-D-arabinofuranosyl)cytosine; 4-Amino-1-(2-deoxy-2-fluoro-α-D-arabinofuranosyl)-2(1H)-pyrimidinone; 4-amino-1-[(2S,3S,4R,5R)-3-fluoro-4-hydroxy-5-(hydroxymethyl)oxolan-2-yl]pyrimidin-2-one; 4-Amino-1-(2-deoxy-2-fluoro-α-D-arabinofuranosyl)-2(1H)-pyrimidinone; α-FAC; α-D-FAC **Literature:** Radu C.G. et al. Molecular imaging of lymphoid organs and immune activation by positron emission tomography with a new [^{18}F]-labeled 2´-deoxycytidine analog. Nature Medicine 2008, 14, 783-788.	**2931.0002: 2 mg per vial** **2931.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2940	**3´-Fluoro-2´,3´-dideoxyuridine** **Precursor for 5-[*I]FLIU** **Precursor for 5-[^{18}F]FLFU** $C_9H_{11}FN_2O_4$ **Molar Mass:** 230.19 [41107-56-6] Off-white solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: Uridine, 2´,3´-dideoxy-3´-fluoro- **Synonymes:** 1-(2,3-Dideoxy-3-fluoro-β-D-ribofuranosyl)uracil; 2´,3´-Dideoxy-3´-fluorouridine	**2940.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**

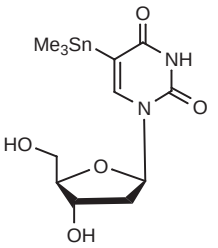


Literature:

Mentel R. et al. Inhibitory activity of 3´-fluoro-2´ deoxythymidine and related nucleoside analogs against adenoviruses in vitro. Antiviral Res. 1997, 34, 113-119.

Matthes E. et al. Inhibition of hepatitis B virus production by modified 2´,3´-dideoxythymidine and 2´,3´-dideoxy-5-methylcytidine derivatives. In vitro and in vivo studies. Biochem. Pharmacol. 1992, 43, 1571-1577.

Product Number	Product	Order number / Unit
2948	**5-Trimethylstannyl-2´-deoxyuridine** **Precursor for [^{123}I]IUdR** **(5-[^{123}I]Iodo-2´-deoxyuridine)** $C_{12}H_{20}N_2O_5Sn$ **Molar Mass:** 391.01 [146629-34-7] Colourless to off-white solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{119}Sn NMR spectra **Chemical Name:** CA index name: Uridine, 2´-deoxy-5-(trimethylstannyl)- **Synonymes:** 1-(4-Hydroxy-5-hydroxymethyl-tetrahydro-furan-2-yl)-5-trimethylstannanyl-1H-pyrimidine-2,4-dione; 1-(2-Deoxy-β-D-ribofuranosyl)-5-trimethylstannyl-uracil; 2´-Deoxy-5-trimethylstannyl-uridine	**2948.0010: 10 mg per vial** **2948.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.**

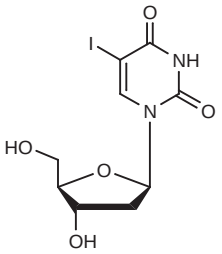


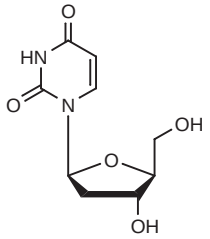
Literature:

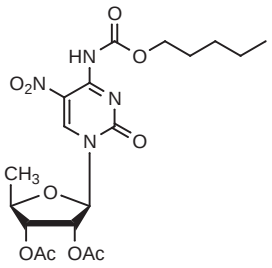
Kassis A. I. 5-([^{123}I]/[^{125}I])Iodo-2´-deoxyuridine for cancer diagnosis and therapy. J. Nucl. Med, Allied Sci. 1990, 34, 299-303.

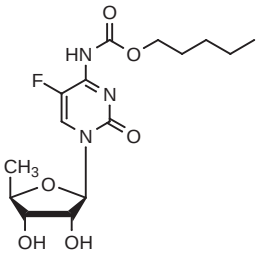
Harrison et al. Bladder cancer-[^{123}I]IUdR imaging in preparation for [^{125}I]IUdR therapy. J. Nucl. Med. 1994, 35, 144P.

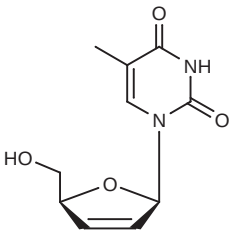
Koziorowski J. et al. Simple preparation of ^{76}Br-, ^{123}I-, and $_{211}$At-labeled 5-halo-2´-deoxyuridine. J. Radioanal. Nucl. Chem. 1997, 219, 127-128.

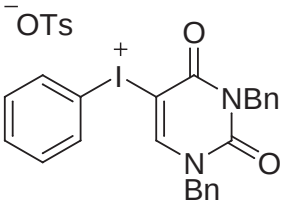
Product Number	Product	Order number / Unit
2949	**IUdR** **Reference standard for [^{123}I]IUdR and [^{125}I]IUdR (5-[^{123}I]Iodo-2´-deoxyuridine, 5-[^{125}I]Iodo-2´-deoxyuridine)** $C_9H_{11}IN_2O_5$ **Molar Mass:** 354.1 [54-42-2] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Uridine, 2´-deoxy-5-iodo- **Synonymes:** 1-(2-Deoxy-β-D-ribofuranosyl)-5-iodouracil; 2´-Deoxy-5-iodouridine; 5-Iodo-2´-deoxyuridine; 5-Iodo-2´-desoxyuridine; (+)-5-Iodo-2´-deoxyuridine; 5-Iododeoxyuridine; 5-Iodouracil deoxyriboside; 5IUDR; 1-(4-Hydroxy-5-hydroxymethyl-tetrahydro-furan-2-yl)-5-iodo-1H-pyrimidine-2,4-dione; Idoxuridine; IDU; Dendrid; Emanil **Literature:** Kassis A. I. 5-([^{123}I]/[^{125}I])Iodo-2´-deoxyuridine for cancer diagnosis and therapy. J. Nucl. Med, Allied Sci. 1990, 34, 299-303. Harrison et al. Bladder cancer-[^{123}I]IUdR imaging in preparation for [^{125}I]IUdR therapy. J. Nucl. Med. 1994, 35, 144P. Koziorowski J. et al. Simple preparation of ^{76}Br-, ^{123}I-, and $_{211}$At-labeled 5-halo-2´-deoxyuridine. J. Radioanal. Nucl. Chem. 1997, 219, 127-128.	**2949.0010: 10 mg per vial** **2949.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

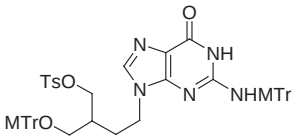
Product Number	Product	Order number / Unit
2950	**2´-Deoxy-L-uridine** $C_9H_{12}N_2O_5$ **Molar Mass:** 228.07 [31501-19-6] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: 2,4(1H,3H)-Pyrimidinedione, 1-(2-deoxy-β-L-erythro-pentofuranosyl) **Synonymes:** 1-(2´-Deoxy-β-L-erythro-pentofuranosyl)uracil; 2´-Deoxy-L-uridine; β-L-2´-deoxyuridine **Literature:** Spadari S. et al. L-Thymidine is phosphorylated by herpes simplex virus type 1 thymidine kinase and inhibits viral growth. J. Med. Chem. 1992, 35, 4214-4220. Maga G. et al. Lack of stereospecificity of suid pseudorabies virus thymidine kinase. Biochem. J. 1993, 294, 381-385. Kouni M.H. et al. Effects of modifications in the pentose moiety and conformational changes on the binding of nucleoside ligands to uridine phosphorylase from Toxoplasma gondii. Biochem. Pharmacol. 1996, 51, 1687-1700. Verri A. et al. Lack of enantiospecificity of human 2´-deoxycytidine kinase: relevance for the activation of beta.-L-deoxycytidine analogs as antineoplastic and antiviral agents. Mol. Pharmacol. 1997, 51, 132-138.	**2950.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2952	**Nitro-Xeloda** **Precursor for [^{18}F]Xeloda** $C_{19}H_{26}N_4O_{10}$ **Molar Mass:** 470.43 [865474-03-9] Colourless to yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: Cytidine, 5´deoxy-5-nitro-N-[(pentoxy)carbonyl]-, 2´,3´-diacetate **Synonymes:** 2´,3´-Di-O-acetyl-5´-deoxy-5-nitro-N4-(pentyloxycarbonyl)cytidine; Nitroxeloda **Literature:** Xiangshu F. et al. Synthesis of [^{18}F]Xeloda as a novel potential PET radiotracer for imaging enzymes in cancers. Nucl. Med. Biol. 2004, 31, 1033-1041.	**2952.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2953	**Xeloda** **Reference standard for [^{18}F]Xeloda** $C_{15}H_{22}FN_3O_6$ **Molar Mass:** 359.35 [154361-50-9] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra; HPLC **Chemical Name:** CA index names: Cytidine, 5´-deoxy-5-fluoro-N-[(pentyloxy)carbonyl]-; Carbamic acid, [1-(5-deoxy-β-D-ribofuranosyl)-5-fluoro-1,2-dihydro-2-oxo-4-pyrimidinyl]-, pentyl ester **Synonymes:** 5´-Deoxy-5-fluoro-N4-(pentyloxycarbonyl)cytidine; 5-Deoxy-5-fluoro-N-[(pentyloxy)carbonyl]cytidine; 5´-Deoxy-5-fluorocytisine; Pentyl [1-(3,4-dihydroxy-5-methyl-oxolan-2-yl)-5-fluoro-2-oxo-pyrimidin-4-yl]aminoformate; Capecitabine; Capecitibine; Capecytabine; Capiibine; Captabin; Ro 09-1978 **Literature:** Xiangshu F. et al. Synthesis of [^{18}F]Xeloda as a novel potential PET radiotracer for imaging enzymes in cancers. Nucl. Med. Biol. 2004, 31, 1033-1041.	**2953.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

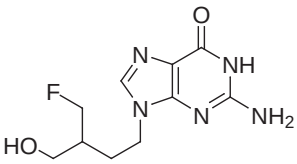
Product Number	Product	Order number / Unit
2954	**2´,3´-Didehydro-3´-deoxythymidine** **Reference standard for byproduct of [^{18}F]FLT synthesis (3´-Deoxy-3´-[^{18}F]fluorothymidine)** $C_{10}H_{12}N_2O_4$ **Molar Mass:** 224.21 [3056-17-5] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Thymidine, 2´, 3´-didehydro-3´-deoxy- **Synonymes:** 3´-Deoxy-2´,3´-didehydrothymidine; 3´-deoxythymidin-2´-ene; 1-((2R,5S)-5-Hydroxymethyl-2,5-dihydro-furan-2-yl)-5-methyl-1H-pyrimidine-2,4-dione; 1-[2,3-dideoxy-β-D-glycero-pent-2-enofuranosyl]thymine; BMY 27857; D 4T; D4T (nucleoside); NSC 163661; Sanilvudine; Stavir; Stavudine; Zerit **Literature:** Cleij M.C. et al. An improved synthesis of 3´-Deoxy-3´-[^{18}F]Fluorothymidine ([^{18}F]FLT) and the fate of the precursor, 2,3´-Anhydro-5-O-(4,4´-dimethoxytrityl)-thymidine. J. Labelled Compd. Radiopharm. 44, Suppl. 1, 2001, 871-873.	**2954.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2958	**5-Fluorouracil precursor** **Precursor for [^{18}F]-5-FU ([^{18}F]-5-fluorouracil)** $C_{31}H_{27}IN_2O_5S$ **Molar Mass:** 666.53 [219638-33-2] (cation) Colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name (cation only): Iodonium, phenyl[1,2,3,4-tetrahydro-2,4-dioxo-1,3-bis(phenylmethyl)-5-pyrimidinyl]- **Synonymes:** (1,3-dibenzyl-2,4-dioxo-1,2,3,4-tetrahydrophyrimidin-5-yl)(phenyl)iodonium tosylate; phenyl(N,N-dibenzyluracil)iodonium tosylate; Iodonium, phenyl[1,2,3,4-tetrahydro-2,4-dioxo-1,3-bis(phenylmethyl)-5-pyrimidinyl]-, salt with 4-methylbenzenesulfonic acid **Literature:** Lee C.L. et al. Synthesis and biological evaluation of [F-18]5-fluorouracil using nucleophilic F-18 substitution. J. Nucl. Med. 2007, 48 (S2), 181.	**Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
2960	**Tosyl-FHBG** **Precursor for [^{18}F]FHBG (9-(4-[^{18}F]Fluoro-3-[hydroxymethyl]butyl)guanine)** $C_{57}H_{53}N_5O_7S$ **Molar Mass:** 952.13 [206067-84-7] Off-white solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 6H-Purin-6-one, 1,9-dihydro-9-[3-[[(4-methoxyphenyl)diphenylmethoxy]methyl]-4-[[(4-methylphenyl)sulfonyl]oxy]butyl]-2-[[(4-methoxyphenyl)diphenylmethyl]amino]- **Synonymes:** N2-(p-Anisyldiphenylmethyl)-9-[(4-(p-toluolsulfonyloxy))-3-p-anisyldiphenylmethoxy-methylbutyl]guanine; 1,9-dihydro-9-N2-(p-Anisyldiphenylmethyl)-9-[(4-(p-toluolsulfonyloxy))-3-p-anisyldiphenylmethoxy-methylbutyl]guanine; 6H-Purin-6-one, 1,9-dihydro-9-[3-[[(4-methoxyphenyl)diphenylmethoxy]methyl]-4-[[(4-methylphenyl)sulfonyl]oxy]butyl]-2-[[(4-methoxyphenyl)diphenylmethyl]amino]-	**2960.0003: 3 mg per vial** **2960.0004: 4 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

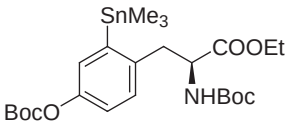
Alauddin M.M. et al. Synthesis and preliminary evaluation of 9-(4-[^{18}F]-fluoro-3-hydroxymethylbutyl)guanine ([^{18}F]FHBG): a new potential imaging agent for viral infection and gene therapy using PET. Nucl. Med. Biol. 1998, 25, 175-18

Product Number	Product	Order number / Unit
2970	**FHBG** **Reference standard for [^{18}F]FHBG (9-(4-[^{18}F]Fluoro-3-[hydroxymethyl]butyl)guanine)** $C_{10}H_{14}FN_5O_2$ **Molar Mass:** 255.25 [206067-83-6] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 90 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 6H-Purin-6-one, 2-amino-9-[4-(fluoro)-3-(hydroxymethyl)butyl]-1,9-dihydro **Synonymes:** 9-[(4-Fluoro)-3-hydroxymethylbutyl]guanine; 9-(4-fluoro-3-[hydroxymethyl]butyl)guanine	**2970.0002: 2 mg per vial** **2970.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Yaghoubi S.S. et al. Direct correlation between positron emission tomographic images of two reporter genes delivered by two distinct adenoviral vectors. Gene Therapy 2001, 8, 1072-1080.

Alauddin M.M. et al. Synthesis and preliminary evaluation of 9-(4-[^{18}F]-fluoro-3-hydroxymethylbutyl)guanine ([^{18}F]FHBG): a new potential imaging agent for viral infection and gene therapy using PET. Nucl. Med. Biol. 1998, 25, 175-18

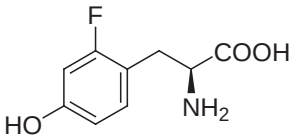
Product Number	Product	Order number / Unit
3000	**N,O-Di-Boc-2-TMSn-L-tyrosine ethyl ester** **Precursor for 2-[^{18}F]Fluoro-L-tyrosine** $C_{24}H_{39}NO_7Sn$ **Molar Mass:** 572.28 [400885-40-7] Yellowish, highly viscous oil packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{119}Sn NMR spectra; HPLC **Chemical Name:** CA index name: L-Tyrosine, N-[(1,1-dimethylethoxy)carbonyl]-2-(trimethylstannyl)-, ethyl ester, 1,1-dimethylethyl carbonate (ester) **Synonymes:** N,O-Di-Boc-2-trimethylstannyl-L-p-tyrosine ethyl ester; 2-TT	**3000.0060: 60 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Hess E. et al. Synthesis of 2-[^{18}F]fluoro-L-tyrosine via regiospecific fluoro-de-stannylation. Appl. Radiat. Isot. 2002, 57, 185-191.

Hess E. Production of [^{18}F]fluorine via the 18O(p,n)^{18}F nuclear reaction and application in the ^{18}F-labelling of aromatic amino acids. Berichte des Forschungszentrums Jülich 2001, Juel-3873 i-ix, 1-144.

Nef W.W. et al. N-acetyl-2-(trimethyl-stannyl)-4-butoxycarbonyloxy-L-phenylalaninethylester (4) for the production of 2-fluorotyrosine. Eur. J. Nucl. Med. 1997, 24, 1056.

Product Number	Product	Order number / Unit
3010	**2-Fluoro-tyrosine** **Reference standard for 2-[^{18}F]Fluoro-L-tyrosine** $C_9H_{10}FNO_3$ **Molar Mass:** 199.18 [78709-81-6] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: Propionic acid, 2-amino-3-(4-hydroxy-2-fluoro-phenyl), (2S) **Synonymes:** 2-Fluoro-L-p-tyrosine; 2´-Fluoro-L-tyrosine; 2-Fluoro-L-tyrosine; 2-Fluoro-tyrosine; L-2- Fluoro-tyrosine; 2-FT	**3010.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Coenen H.H. et al. Cerebral metabolism of L-[2-^{18}F]fluorotyrosine, a new PET tracer of protein synthesis. J. Nucl. Med. 1989, 30, 1367-72.

Ishiwata K. et al. Re-evaluation of amino acid PET studies: Can the protein synthesis rates in brain and tumor tissues be measured in vivo. J. Nucl. Med. 1993, 34, 1936-43.

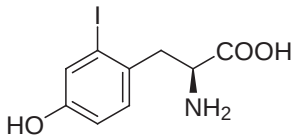
Product Number	Product	Order number / Unit
3020	**2-Iodo-tyrosine** **Precursor for 2-[^{123}I]Iodo-L-tyrosine**	**3020.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_9H_{10}INO_3$ **Molar Mass:** 307.09

[78853-38-0]

Off-white solid packaged in dark glass screw cap vials.

Purity: > 95 % (HPLC)



Certificates:
CoA; ^{1}H NMR spectrum

Chemical Name:
CA index name: L-Tyrosine, 2-iodo-

Synonymes:
Propionic acid, 2-amino-3-(4-hydroxy-2-iodo-phenyl), (2S);
L-2-Iodo-p-tyrosine; 2-IT

Literature:

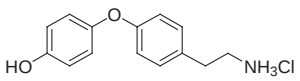
Mertens J. et al. Radioiodo-D-2-I-Phenylalanine a New Tumor Specific Tracer for Diagnosis and Systemic Radionuclide Therapy. Eur. J. Nucl. Med. 2004, 31, S220, 68.

Lahoutte T. et al. Comparative Biodistribution of Iodinated Amino Acids in Rats: Selection of the Optimal Analog for Oncologic Imaging Outside the Brain J. Nucl. Med. 2003, 44, 1489-1494.

Product Number	Product	Order number / Unit
3035	**Thyronamine Hydrochloride** **Metabolite of thyroid hormone**	**Please inquire for customized filling and bulk quantities.**

$C_{14}H_{16}ClNO_2$ **Molar Mass:** 265.74

[5221-18-1]



Colourless solid packaged in dark glass screw cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H NMR spectrum; HPLC

Chemical Name:
CA index name: Phenol, 4-[4-(2-aminoethyl)phenoxy]-, hydrochloride (1:1)

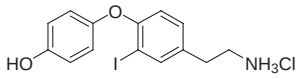
Synonymes:
T0AM; Thyronamine Hydrochloride;
4-(4-Hydroxyphenoxy)phenethylamine Hydrochloride;
4-[4-(2-Amino-ethyl)-phenoxy]-phenol Hydrochloride

Literature:
Hart M.E. et al. Trace Amine-Associated Receptor Agonists: Synthesis and Evaluation of Thyronamines and Related Analogues. J. Med. Chem. 2006, 49, 1101-1112.

Product Number	Product	Order number / Unit
3036	**3-Iodothyronamine Hydrochloride** **Metabolite of thyroid hormone**	**Please inquire for customized filling and bulk quantities.**

$C_{14}H_{15}ClINO_2$ **Molar Mass:** 391.63

[788824-64-6]



Colourless solid packaged in dark glass screw cap vials.

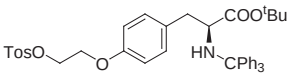
Purity: > 95 %

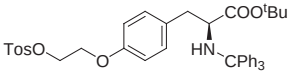
Certificates:
CoA; ^{1}H NMR spectrum; HPLC

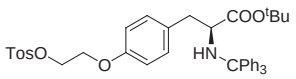
Chemical Name:
CA index name: Phenol, 4-[4-(2-aminoethyl)-2-iodophenoxy]-, hydrochloride (1:1)

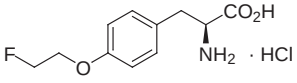
Synonymes:
T1AM; 3-Iodothyronamine Hydrochloride;
4-[4-(2-Aminoethyl)-2-iodophenoxy]phenol Hydrochloride

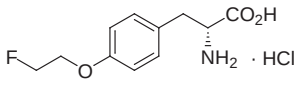
Literature:
Hart M.E. et al. Trace Amine-Associated Receptor Agonists: Synthesis and Evaluation of Thyronamines and Related Analogues. J. Med. Chem. 2006, 49, 1101-1112.

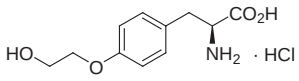
Product Number	Product	Order number / Unit
3050	**TET** **Precursor for [^{18}F]FET (O-(2-[^{18}F]Fluoroethyl)-L-tyrosine)** $C_{41}H_{43}NO_6S$ **Molar Mass:** 677.85 [478037-15-9] Colourless or nearly colourless solid or foam packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: L-Tyrosine, O-[2-[[(4-methylphenyl)sulfonyl]oxy]ethyl]-N-(triphenylmethyl)-, 1,1-dimethylethyl ester **Synonymes:** L-Tyrosine, O-(2-tosyloxyethyl)-N-trityl, tert-butyl ester; (2S)-O-(2´-tosyloxyethyl)-N-trityl-tyrosine-tert-butyl ester **Literature:** Hamacher K. et al. Efficient routine Production of the ^{18}F-labelled amino acid O-(2-[^{18}F]fluoroethyl)-L-tyrosine. Appl. Radiat. Isotop. 2002, 57, 853-856.	**3050.0012: 12 mg per vial** **Please inquire for customized filling and bulk quantities.** 

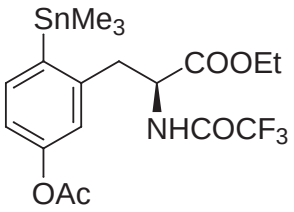
Product Number	Product	Order number / Unit
3051	**TET (GMP)** **Precursor for [^{18}F]FET (O-(2-[^{18}F]Fluoroethyl)-L-tyrosine)** Manufactured according to GMP requirements for APIs for use in clinical trials (ICH Q7 chapter 19) $C_{41}H_{43}NO_6S$ **Molar Mass:** 677.85 [478037-15-9] Colourless or nearly colourless solid or foam packaged in clear glass vials (10 ml headspace) **Purity:** ≥ 98 % **Certificates:** CoA with NMR and IR spectra (identity); optical rotation (identity); HPLC (purity); GC (residual solvents); microbiology test **Chemical Name:** CA index name: L-Tyrosine, O-[2-[[(4-methylphenyl)sulfonyl]oxy]ethyl]-N-(triphenylmethyl)-, 1,1-dimethylethyl ester **Synonymes:** L-Tyrosine, O-(2-tosyloxyethyl)-N-trityl, tert-butyl ester; (2S)-O-(2´-tosyloxyethyl)-N-trityl-tyrosine-tert-butyl ester **Literature:** Same as product number 3050.	**3051.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
3052	**TET (GMP)** **Precursor for [^{18}F]FET (O-(2-[^{18}F]Fluoroethyl)-L-tyrosine)** Manufactured according to GMP requirements for APIs for use in clinical trials (ICH Q7 chapter 19) $C_{41}H_{43}NO_6S$ **Molar Mass:** 677.85 [478037-15-9] Colourless or nearly colourless solid or foam packaged in dark glass crimp cap vials. **Purity:** $\geq$ 98 % **Certificates:** CoA with NMR and IR spectra (identity); optical rotation (identity); HPLC (purity); GC (residual solvents); microbiology test **Chemical Name:** CA index name: L-Tyrosine, O-[2-[[(4-methylphenyl)sulfonyl]oxy]ethyl]-N-(triphenylmethyl)-, 1,1-dimethylethyl ester **Synonymes:** L-Tyrosine, O-(2-tosyloxyethyl)-N-trityl, tert-butyl ester; (2S)-O-(2´-tosyloxyethyl)-N-trityl-tyrosine-tert-butyl ester **Literature:** Same as product number 3050.	**3052.0005: 5 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
3061	**FET hydrochloride** **Reference standard for [^{18}F]FET (O-(2-[^{18}F]Fluoroethyl)-L-tyrosine) hydrochloride** $C_{11}H_{14}FNO_3 \cdot HCl$ **Molar Mass:** 263.69 [854750-33-7] (free base) Colourless or nearly colourless solid packaged in dark glass screw cap vials. **Purity:** $>$ 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** L-Tyrosine, O-(2-fluoroethyl)-; hydrochloride salt **Synonymes:** L-Tyrosine, O-(2-fluoroethyl)-, hydrochloride; (2S)-O-(2´-fluoroethyl)-tyrosine, hydrochloride; FET · HCl **Literature:** Hamacher K. et al. Efficient routine Production of the ^{18}F-labelled amino acid O-(2-[^{18}F]fluoroethyl)-L-tyrosine. Appl. Radiat. Isotop. 2002, 57, 853-856. Hamacher K. et al. Convenient synthesis of n.c.a. O-(2-[^{18}F]fluoroethyl)-L-tyrosine. J. Labelled Compd. Radiopharm. 2001, 44, 855. Wester H.-J. et al. Synthesis and radiopharmacology of O-(2-[^{18}F]fluoroethyl)-L-tyrosine for tumor imaging. J. Nucl. Med. 1999, 40, 205-212.	**3061.0010: 10 mg per vial** **3061.0020: 20 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
3071	**D-FET hydrochloride** **Reference standard for D-[^{18}F]FET (O-(2-[^{18}F]Fluoroethyl)-D-tyrosine) hydrochloride** $C_{11}H_{14}FNO_3 \cdot HCl$ **Molar Mass:** 263.69 [223463-90-9] (free base) Colourless or nearly colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** D-Tyrosine, O-(2-fluoroethyl)-, hydrochloride salt **Synonymes:** D-Tyrosine, O-(2-fluoroethyl)-, hydrochloride; (2R)-O-(2´-fluoroethyl)-D-tyrosine, hydrochloride; D-FET · HCl **Literature:** Hamacher K. et al. Efficient routine Production of the ^{18}F-labelled amino acid O-(2-[^{18}F]fluoroethyl)-L-tyrosine. Appl. Radiat. Isotop. 2002, 57, 853-856. Hamacher K. et al. Convenient synthesis of n.c.a. O-(2-[^{18}F]fluoroethyl)-L-tyrosine. J. Labelled Compd. Radiopharm. 2001, 44, 855. Wester H.-J. et al. Synthesis and radiopharmacology of O-(2-[^{18}F]fluoroethyl)-L-tyrosine for tumor imaging. J. Nucl. Med. 1999, 40, 205-212.	**3071.0010: 10 mg per vial** **3071.0020: 20 mg per vial** **Please inquire for customized filling and bulk quantities.** 

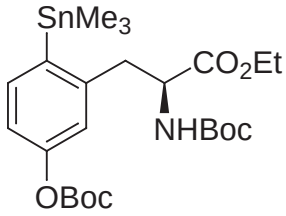
Product Number	Product	Order number / Unit
3081	**(L)-HET hydrochloride** $C_{11}H_{15}NO_4 \cdot HCl$ **Molar Mass:** 261.70 [481052-68-0] (free base) Colourless or nearly colourless solid packaged in dark glass screw cap vials. **Purity:** ≥ 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** L-Tyrosine, O-(2-hydroxyethyl)-, hydrochloride salt **Synonymes:** HET · HCl; (L)-HOET **Literature:** no literature reference available	**3081.0010: 10 mg per vial** **3081.0020: 20 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
3100	**N-Trifluoroacetyl-5-acetoxy-2-trimethylstannyl-phenylalanine ethyl ester** **Precursor for [^{18}F]FMT ([^{18}F]Fluoro-m-L-tyrosine)** $C_{18}H_{24}F_3NO_5Sn$ **Molar Mass:** 510.09 [148613-10-9] Nearly colourless oil packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H, ^{19}F and ^{119}Sn NMR spectra **Chemical Name:** CA index name: L-Phenylalanine, 5-(acetyloxy)-N-trifluoroacetyl-2-trimethylstannyl, ethyl ester **Synonymes:** N-trifluoroacetyl-3-acetyl-6-trimethylstannyl-L-m-tyrosine ethyl ester; N-trifluoroacetyl-3-acetoxy-6-trimethylstannyl-L-phenylalanine ethyl ester	**3100.0060: 60 mg per vial** **3100.0090: 90 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

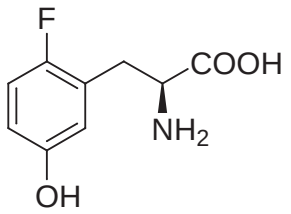
Namavari M. et al. Synthesis of 6-[^{18}F] and 4-[^{18}F]Fluoro-L-m-tyrosines via Regioselective Radiofluorodestannylation. Appl. Radiat. Isot. 1993, 44, 527-536.

DeJesus O.T. et al. Evaluation of fluorinated m-tyrosine analogs as PET imaging agents of dopamine nerve terminals: comparison with 6-fluoroDOPA. J. Nucl. Med. 1997, 38, 630-636.

Product Number	Product	Order number / Unit
3110	**N,O-Di-Boc-2-TMSn-m-tyrosine ethyl ester** **Precursor for [^{18}F]FMT ([^{18}F]Fluoro-m-L-tyrosine)** $C_{24}H_{39}NO_7Sn$ **Molar Mass:** 572.28 [845882-24-8] Nearly colourless oil packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{119}Sn NMR spectra **Chemical Name:** CA index name: L-Phenylalanine, N-[(1,1-dimethylethoxy)carbonyl]-5-[[(1,1-dimethylethoxy)carbonyl]oxy]-2-(trimethylstannyl)-, ethyl ester **Synonymes:** N-(tert-Butyloxycarbonyl)-5-tert-butyloxycarbonyloxy-2-trimethylstannyl-L-phenylalanine ethyl ester	**3110.0060: 60 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

VanBrocklin H.F. et al. A new precursor for the preparation of 6-[^{18}F]Fluoro-L-m-tyrosine (FMT): Efficient synthesis and comparison of radiolabeling. Appl. Radiat. Isot. 2004, 61, 1289-1294.

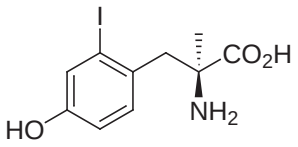
Product Number	Product	Order number / Unit
3130	**2-Fluoro-m-Tyrosine** **Reference standard for [^{18}F]FMT ([^{18}F]Fluoro-m-L-tyrosine)** $C_9H_{10}FNO_3$ **Molar Mass:** 199.18 [148613-12-1] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: L-Phenylalanine, 2-fluoro-5-hydroxy- **Synonymes:** 2-Amino-3-(2-fluoro-5-hydroxy-phenyl)-propionic acid; 2-Fluoro-m-L-Tyrosine; 2-Fluoro-m-Tyrosine; 6-Fluoro-3-tyrosine; F-m-L-Tyrosine; FMT	**3130.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

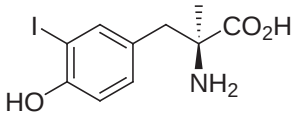
Literature:

Namavari M. et al. Synthesis of 6-[^{18}F] and 4-[^{18}F]Fluoro-L-m-tyrosines via Regioselective Radiofluorodestannylation. Appl. Radiat. Isot. 1993, 44, 527-536.

DeJesus O.T. et al. Effect of 6-fluoro-m-tyrosine on dopamine release and metabolism in rat striatum using in vivo microdialysis. Brain Research 2000, 884, 192-195.

DeJesus O.T. et al. Affinities of dopamine analogs for monoamine granular and plasma membrane transporters: implications for PET dopamine studies. Life Sciences 1997, 60, 2399-2406.

Product Number	Product	Order number / Unit
3180	**2-Iodo-α-methyl-p-tyrosine** **Reference standard for 2-[^{123}I]Iodo-α-methyl-p-L-tyrosine** $C_{10}H_{12}INO_3$ **Molar Mass:** 321.11 CAS-RN not yet assigned Off-white solid packaged in dark glass screw cap vials. **Purity:** > 95 % (HPLC) **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** L-Tyrosine, 2-iodo-α-methyl- **Synonymes:** Tyrosine, 2-iodo-α-methyl-, L-; L-2-Iodo-α-methyl-tyrosine; o-Iodo-α-methyl-L-tyrosine, 2-IAMT **Literature:** no literature reference available	**3180.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

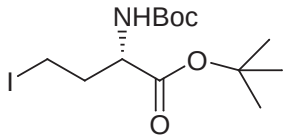
Product Number	Product	Order number / Unit
3190	**3-Iodo-α-methyl-p-tyrosine** **Reference standard for 3-[^{123}I]Iodo-α-methyl-L-tyrosine** $C_{10}H_{12}INO_3$ **Molar Mass:** 321.11 [4298-17-3] Off-white solid packaged in dark glass screw cap vials. **Purity:** > 95 % (HPLC) **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: L-Tyrosine, 3-iodo-α-methyl- **Synonymes:** L-3-Iodo-α-methyl-p-tyrosine; m-Iodo-α-methyl-L-tyrosine; 3-IMT; 3-IAMT **Literature:**	**3190.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Lahoutte T. et al. Increased Tumor Uptake of 3-^{123}I-Iodo-L-α-Methyltyrosine After Preloading with Amino Acids: An In Vivo Animal Imaging Study. J. Nucl. Med. 2002, 43, 1201-1206.

Weckesser M. et al. The role of L-3-I-123-iodine-a-methyl tyrosine -SPECT in cerebral gliomas. Nuklearmedizin 2000, 39, 233-240.

Stöcklin G. et al. Direct n.c.a. Electrophilic Radioiodination of Tyrosine Analogues; Their in vivo Stability and Brain-Uptake in Mice. Appl. Radiat. Isot. 1994, 45, 929-935.

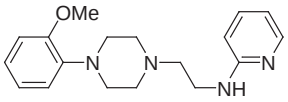
Biersack H.J. et al. Imaging of Brain Tumors with L-3-[^{123}I]Iodo-a-Methyl Tyrosine and SPECT. J. Nucl. Med. 1989, 30, 110-112.

Product Number	Product	Order number / Unit
3191	**(S)-tert-Butyl 2-((tert-butoxycarbonyl) amino)-4-Iodobutanoat** **Precursor for [5-^{11}C]-Glutamine** $C_{13}H_{24}INO_4$ **Molar Mass:** 385.24 [161370-66-7] Pale yellow solid packaged in dark glass vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Butanoic acid, 2-[[(1,1-dimethylethoxy)carbonyl]amino]-4-iodo-, 1,1-dimethylethyl ester, (2S)- **Synonymes:** (S)-tert-Butyl 2-((tert-butoxycarbonyl) amino)-4-Iodobutanoat **Literature:** Qu W. et al. Preparation and Characterization of L-[5-^{11}C]-Glutamine for Metabolic Imaging of Tumors. J. Nucl. Med. 2012, 53, 98-105. Qu W. et al. Synthesis of Optically Pure 4-Fluoro-Glutamines as Potential Metabolic Imaging Agents for Tumors. J. Am. Chem. Soc. 2011, 133, 1122-1133.	**3191.1000: 1 g per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
3200	**WAY 100634** **Precursor for [^{11}C-carbonyl]-WAY 100635**	**Please inquire for customized filling and bulk quantities.**

$C_{18}H_{24}N_4O$ **Molar Mass:** 312.41

[155204-28-7]



Yellowish oil packaged in dark glass crimp cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H NMR spectrum

Chemical Name:
CA index name: 1-Piperazine-ethanamine,
4-(2-methoxyphenyl)-N-2-pyridinyl-

Synonymes:
4-(2-methoxyphenyl)-N-2-pyridinyl-1-piperazineethanamine;
1-(2-Methoxyphenyl)-4-2-(2-pyridylamino)-ethyl)-piperazine

Literature:

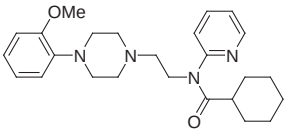
McCarron J.A. et al. Remotely-controlled production of the 5-HT1A receptor radioligand, [carbonyl-^{11}C]WAY-100635, via ^{11}C-carboxylation of an immobilized Grignard reagent. J. Labelled Compd. Radiopharm. 1996, 38, 941-953.

Hwang D.-R. et al. An improved one-pot procedure for the preparation of [^{11}C-carbonyl]-WAY100635. Nucl. Med. Biol. 1999, 26, 815-819.

Product Number	Product	Order number / Unit
3210	**WAY 100635** **Reference standard for [^{11}C-carbonyl]-WAY 100635**	**Please inquire for customized filling and bulk quantities.**

$C_{25}H_{34}N_4O_2$ **Molar Mass:** 422.56

[146714-97-8]



Nearly colourless solid or oil packaged in dark glass screw cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H NMR spectrum

Chemical Name:
CA index name: Cyclohexanecarboxamide,
N-[2-[4-(2-methoxyphenyl)-1-piperazinyl]ethyl]-N-2-pyridinyl-

Synonymes:
N-[2-[4-(2-methoxyphenyl)-1-piperazinyl]ethyl]-N-2-pyridinyl-
cyclohexanecarboxamide

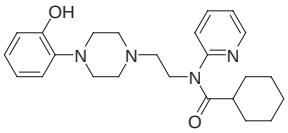
Literature:

McCarron J.A. et al. Remotely-controlled production of the 5-HT1A receptor radioligand, [carbonyl-^{11}C]WAY-100635, via ^{11}C-carboxylation of an immobilized Grignard reagent. J. Labelled Compd. Radiopharm. 1996, 38, 941-953.

Hwang D.-R. et al. An improved one-pot procedure for the preparation of [^{11}C-carbonyl]-WAY100635. Nucl. Med. Biol. 1999, 26, 815-819.

Product Number	Product	Order number / Unit
3220	**Desmethyl-WAY100635** **Precursor for [^{11}C]-WAY 100635**	**Please inquire for customized filling and bulk quantities.**

$C_{24}H_{32}N_4O_2 \cdot x\ H_2O \cdot y\ HCl$ **Molar Mass:** 408.54 (free base)



[146715-34-6]

Nearly colourless solid packaged in dark glass crimp cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H NMR spectrum

Chemical Name:
CA index name: Cyclohexanecarboxamide,
N-[2-[4-(2-hydroxyphenyl)-1-piperazinyl]ethyl]-N-2-pyridinyl-,
hydrochloride (2:3)

Synonymes:
N-[2-[4-(2-hydroxyphenyl)-1-piperazinyl]ethyl]-N-2-pyridinyl-
cyclohexanecarboxamide hydrochloride; Desmethyl-WAY 100635

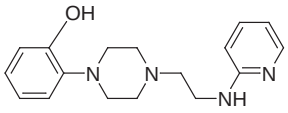
Literature:

Tsukada, H. et al. Effects of aging on 5-HT1A receptors and their functional response to 5-HT1A agonist in the living brain: PET study with [carbonbyl-^{11}C]WAY-100635 in conscious monkeys. Synapse, 2001, 42, 242-251.

Sandell J. et. al. New halogenated [^{11}C]WAY analogues, [^{11}C]6FPWAY and [^{11}C]6BPWAY - Radiosynthesis and assessment as radioligands for the study of brain 5-HAT^{1A} receptors in living monkey. Nuclear Medicine and Biology, 2001, 28, 177-185.

Product Number	Product	Order number / Unit
3230	**Desmethyl-WAY 100634** **Precursor for [^{11}C-carbonyl]-DesmethylWAY100635**	**Please inquire for customized filling and bulk quantities.**

$C_{17}H_{22}N_4O$ **Molar Mass:** 371.30



[146714-76-3]

Colorless to nearly colorless solid packaged in dark glass crimp cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H NMR spectrum

Chemical Name:
CA index name: Phenol,
2-[4-[2-(2-pyridinylamino)ethyl]-1-piperazinyl]-

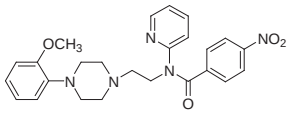
Synonymes:
N-Descyclohexyl-O-Desmethyl-WAY100635;
O-Desmethyl-WAY100634

Literature:

Pike V.W. et al. [Carbonyl-^{11}C]Desmethyl-WAY-100635 (DWAY) is a potent and selective radioligand for central 5-HT1A receptors in vitro and in vivo. Eur. J. Nucl. Med. 1998, 25, 338-346.

Pike V.W. et al. Pre-clinical development of a radioligand for studies of central 5-HT1A receptors in vivo - [^{11}C]WAY-100635. Med. Chem. Res. 1995, 5, 208-27.

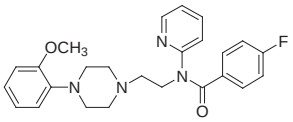
Pike V.W. et al. Radioligands for the study of brain 5-HT1A receptors in vivo-development of some new analogues of way. Nucl.Med. Biol. 2000, 27,449-455.

Product Number	Product	Order number / Unit
3240	**Nitro-MPPF** **Precursor for [^{18}F]MPPF** $C_{25}H_{27}N_5O_4$ **Molar Mass:** 461.51 [155204-27-6] Yellow solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: Benzamide, N-[2-[4-(2-methoxyphenyl)-1-piperazinyl]ethyl]-4-nitro-N-2-pyridinyl **Synonymes:** 4-Nitro-N-[2-[4-(2-methoxyphenyl)piperazin-1-yl]ethyl]-N-pyridin-2-ylbenzamide	**3240.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Le Bars D. et al. High-yield radiosynthesis and preliminary in vivo evaluation of p-[^{18}F]MPPF, a fluoro analog of WAY-100635. J. Nucl. Med. Biol. 1998, 25, 343-350.

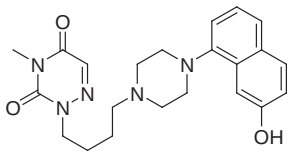
Zhuang Z.-P. et al. Derivatives of 4-(2´-Methoxyphenyl)-1-[2´-(N-2´´-pyridinyl-p-iodobenzamido)ethyl]piperazine (p-MPPI) as 5-HT1A Ligands. J. Med. Chem. 1994, 37, 4572-4575.

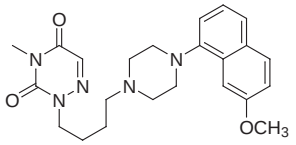
Product Number	Product	Order number / Unit
3250	**MPPF** **Reference standard for [^{18}F]MPPF** $C_{25}H_{27}N_4O_2F$ **Molar Mass:** 434.51 [155204-26-5] Colourless to reddish solid or oil packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: Benzamide, 4-fluoro-N-[2-[4-(2-methoxyphenyl)-1-piperazinyl]ethyl]-N-2-pyridinyl- **Synonymes:** 4-Fluoro-N-[2-[4-(2-methoxyphenyl)piperazin-1-yl]ethyl]-N-pyridin-2-ylbenzamide	**3250.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

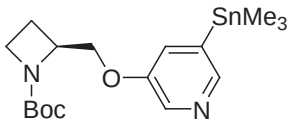
Literature:

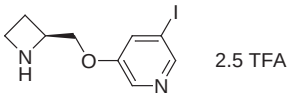
Le Bars D. et al. High-yield radiosynthesis and preliminary in vivo evaluation of p-[^{18}F]MPPF, a fluoro analog of WAY-100635. J. Nucl. Med. Biol. 1998, 25, 343-350.

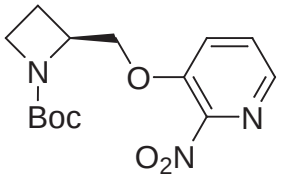
Zhuang Z.-P. et al. Derivatives of 4-(2´-Methoxyphenyl)-1-[2´-(N-2´´-pyridinyl-p-iodobenzamido)ethyl]piperazine (p-MPPI) as 5-HT1A Ligands. J. Med. Chem. 1994, 37, 4572-4575.

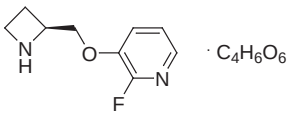
Product Number	Product	Order number / Unit
3260	**Desmethyl-MPT** **Precursor for [^{11}C]MPT** $C_{22}H_{27}N_5O_3$ **Molar Mass:** 409.48 [874471-23-5] Off-white solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: 1,2,4-Triazine-3,5(2H,4H)-dione, 2-[4-[4-(7-hydroxy-1-naphthalenyl)-1-piperazinyl]butyl]-4-methyl- **Synonymes:** 4-Methyl-2-(4-(4-(7-hydroxynaphthalene-1-yl)piperazinyl)butyl)-3,5-dioxo-(2H,4H)-1,2,4-triazine **Literature:** Kumar J.S.D. et al. Synthesis and in Vivo Validation of [O-Methyl-^{11}C]2-4-[4-(7-methoxynaphthalen-1-yl)piperazin-1-yl]butyl-4-methyl-2H-[1,2,4]triazine-3,5-dione: A Novel 5-HT1A Receptor Agonist Positron Emission Tomography Ligand. J. Med. Chem. 2006, 49, 125-134.	**3260.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

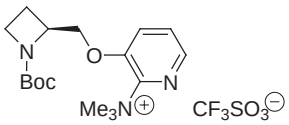
Product Number	Product	Order number / Unit
3270	**MPT** **Reference standard for [^{11}C]MPT** $C_{23}H_{29}N_5O_3$ **Molar Mass:** 423.51 [179756-59-3] Yellowish semisolid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: 1,2,4-Triazine-3,5(2H,4H)-dione, 2-[4-[4-(7-methoxy-1-naphthalenyl)-1-piperazinyl]butyl]-4-methyl- **Synonymes:** 4-Methyl-2-(4-(4-(7-methoxynaphthalene-1-yl)piperazinyl)butyl)-3,5-dioxo-(2H,4H)-1,2,4-triazine **Literature:** Kumar J.S.D. et al. Synthesis and in Vivo Validation of [O-Methyl-^{11}C]2-4-[4-(7-methoxynaphthalen-1-yl)piperazin-1-yl]butyl-4-methyl-2H-[1,2,4]triazine-3,5-dione: A Novel 5-HT1A Receptor Agonist Positron Emission Tomography Ligand. J. Med. Chem. 2006, 49, 125-134.	**3270.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
3300	**TAP** **Precursor for [^{123}I]IAP** $C_{17}H_{28}N_2O_3Sn$ **Molar Mass:** 427.13 [213766-21-3] Colourless to yellowish oil packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{119}Sn NMR spectra **Chemical Name:** CA index name: 1-Azetidinecarboxylic acid, 2-[[[5-(trimethylstannyl)-3-pyridinyl]oxy]methyl]-, 1,1-dimethylethyl ester, (2S)- **Synonymes:** 5-TMSt-A85380; (2S)-2-[[5-Trimethylstannyl-3-pyridinyloxy]methyl]-1-azetidinecarboxylic acid, tert-butyl ester **Literature:** Musachio J.L. et al. Synthesis of an I-123 analog of A-85380 and preliminary SPECT imaging of nicotinic receptors in baboon. Nucl. Med. Biol. 1999, 26, 201-207. Musachio J.L. et al. 5-[I-125/123]Iodo-3(2(S)-azetidinylmethoxy)-pyridine, a radioiodinated analog of A-85380 for in vivo studies of central nicotinic acetylcholine receptors. Life Sci. 1998, 62, 351-357.	**3300.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
3310	**IAP** **Reference standard for [^{123}I]IAP** $C_9H_{11}IN_2O \cdot {}^{5}/_{2}\ C_2HF_3O_2$ **Molar Mass:** 575.15 [213764-92-2] Colourless oil packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H, ^{13}C and ^{19}F NMR spectra **Chemical Name:** CA index name: Pyridine, 3-[(2S)-2-azetidinylmethoxy]-5-iodo-, trifluoroacetate (2:5) **Synonymes:** IAP · TFA; IAP trifluoroacetate; 3-[(2S)-2-azetidinylmethoxy]-5-iodo-pyridine trifluoroacetate; (S)-5-Iodo-3-[(2-azetidinyl)-methoxy]pyridine **Literature:** Musachio J.L. et al. Synthesis of an I-123 analog of A-85380 and preliminary SPECT imaging of nicotinic receptors in baboon. Nucl. Med. Biol. 1999, 26, 201-207. Musachio J.L. et al. 5-[I-125/123]Iodo-3(2(S)-azetidinylmethoxy)-pyridine, a radioiodinated analog of A-85380 for in vivo studies of central nicotinic acetylcholine receptors. Life Sci. 1998, 62, 351-357.	**3310.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
3320	**Nitro-AP** **Precursor for [^{18}F]FAP** $C_{14}H_{19}N_3O_5$ **Molar Mass:** 309.32 [209530-92-7] Yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 1-Azetidinecarboxylic acid, 2-[[[2-nitro-3-pyridinyl]oxy]methyl]-, 1,1-dimethylethyl ester, (2S)- **Synonymes:** 2-Nitro-AP; 2-Nitro-A85380; 2-Nitro-3-[2(S)-N-tert-butoxycarbonyl]-[(2-azetidinyl)-methoxy]pyridine **Literature:** Dollé F. et al. Synthesis of 2-[18]Fluoro-3-[2(S)-2-azetidinyl-methoxy]pyridine, a highly potent radioligand for in vivo imaging central nicotinic acetylcholine receptors. J. Labelled Compd. Radiopharm. 1998, 41, 451-463. Dolle F. et al. Synthesis and Nicotinic Acetylcholine Receptor in Vivo Binding Properties of 2-Fluoro-3-[2(S)-2-azetidinylmethoxy]-pyridine: A New Positron Emission Tomography Ligand for Nicotinic Receptors. J. Med. Chem. 1999, 42, 2251-2259.	**3320.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

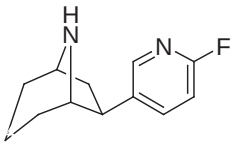
Product Number	Product	Order number / Unit
3340	**FAP tartrate** **Reference standard for [^{18}F]FAP** $C_9H_{11}FN_2O \cdot C_4H_6O_6$ **Molar Mass:** 332.28 [209530-93-8] (free base) Colourless to off-white solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** Pyridine, 3-[(2S)-2-azetidinylmethoxy]-2-fluoro-, tartrate **Synonymes:** 2-Fluoro-A85380 tartrate; 2-Fluoro-3-[2(S)-2-azetidinyl-methoxy]pyridine tartrate **Literature:** Ding Y.-S. et al. Synthesis and evaluation of 6-[^{18}F]fluoro-3-(2(S)- azetidinylmethoxy)pyridine as a PET tracer for nicotinic acetylcholine receptors. Nucl. Med. Biol. 2000, 27, 381-389. Valette H. et al. Imaging central nicotinic acetylcholine receptors in baboons with [^{18}F]fluoro-A-85380. J. Nucl. Med. 1999, 40, 1374-1380. Dolle F. et al. Synthesis and Nicotinic Acetylcholine Receptor in Vivo Binding Properties of 2-Fluoro-3-[2(S)-2-azetidinylmethoxy]pyridine: A New Positron Emission Tomography Ligand for Nicotinic Receptors. J. Med. Chem. 1999, 42, 2251-2259. Horti A.G. et al. Synthesis of a radiotracer for studying nicotinic acetylcholine receptors: 2-[^{18}F]fluoro-3-(2(S)-azetidinylmethoxy)-pyridine (2-[^{18}F]A-85380). J. Labelled Compd. Radiopharm. 1998, 41, 309-318.	**3340.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
3350	**TMA-AP** **Precursor for [^{18}F]FAP** $C_{17}H_{28}N_3O_3 \cdot CF_3O_3S$ **Molar Mass:** 471.49 [233766-75-1] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 2-Pyridinaminium, 3-[[(2S)-1-[(1,1-dimethylethoxy)carbonyl]-2-azetidinyl]methoxy]-N,N,N-trimethyl-, salt with trifluoromethanesulfonic acid (1:1) **Synonymes:** 2-TMAAP; 2-TMA-A85380; (3-[2(S)-N-(tert-butoxycarbonyl)-2-azetidinyl-methoxy]pyridin-2-yl)-trimethylammonium trifluoromethanesulfonate **Literature:** Dolle F. et al. Synthesis and Nicotinic Acetylcholine Receptor in Vivo Binding Properties of 2-Fluoro-3-[2(S)-2-azetidinylmethoxy]pyridine: A New Positron Emission Tomography Ligand for Nicotinic Receptors. J. Med. Chem. 1999, 42, 2251-2259. Bottlaender M. et al. Biodistribution and Radiation Dosimetry of ^{18}F-Fluoro-A-85380 in Healthy Volunteers. J. Nucl. Med. 2003, 44, 596-601.	**3350.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
3351	**(-)-Flubatine standard** **Reference standard for (-)-[^{18}F]Flubatine**	**Please inquire for customized filling and bulk quantities.**

$C_{12}H_{15}FN_2$ **Molar Mass:** 206.26

[845642-53-7]



White to slightly grey solid packaged in dark glass screw cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H and ^{19}F NMR spectra; HPLC

Chemical Name:
(1R,5S,6S)-6-(6-Fluoro-pyridin-3-yl)-8-aza-bicyclo[3.2.1]octane

Synonymes:
ABX063; (-)-Flubatine; (-)-NCFHEB;
(-)-exo-6-(6-fluoro-pyridin-3-yl)-8-aza-bicyclo[3.2.1]octane

Literature:

Brust P. et al. In vivo measurement of nicotinic acetylcholine receptors with [^{18}F]norchloro-fluoro-homoepibatidine. Synapse 2008, 62, 205-218.

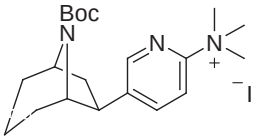
Deuther-Conrad W. et al. Norchloro-fluoro-homoepibatidine (NCFHEB) - a promising radioligand for neuroimaging nicotinic acetylcholine receptors with PET. Eur. Neuropsychopharmacol. 2008, 18, 222-229.

Deuther-Conrad et al. W. Norchloro-fluoro-homoepibatidine: specificity to neuronal nicotinic acetylcholine receptor subtypes in vitro. Farmaco, 2004, 59, 785-792.

Product Number	Product	Order number / Unit
3353	**(-)-Flubatine precursor** **Precursor for (-)-[^{18}F]Flubatine**	**Please inquire for customized filling and bulk quantities.**

$C_{20}H_{32}IN_3O_2$ **Molar Mass:** 473.39

[1421915-93-6]



White to yellowish solid packaged in dark glass crimp cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H NMR spectrum; HPLC

Chemical Name:
5-((1R, 5S, 6S)-8-tert-butoxycarbonyl)-8-azabicyclo[3.2.1]octan-6-yl)-N,N,N-trimethylpyridin-2-aminium iodide

Synonymes:
ABX075; (-)-Flubatine precursor; (-)-NCFHEB precursor;
(-)-5-(8-tert-butoxycarbonyl)-8-azabicyclo[3.2.1]octan-6-yl)-N,N,N-trimethylpyridin-2-aminium iodide

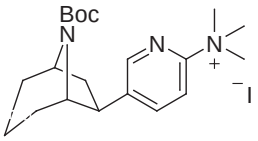
Literature:

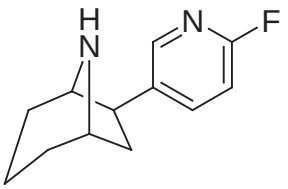
Präkursorverbindungen für die Radiosynthese von [^{18}F]Norchlor-fluor-homoepibatidin. Patent DE 2011080118062700

Brust P. et al. In vivo measurement of nicotinic acetylcholine receptors with [^{18}F]norchloro-fluoro-homoepibatidine. Synapse 2008, 62, 205-218.

Deuther-Conrad W. et al. Norchloro-fluoro-homoepibatidine (NCFHEB) - a promising radioligand for neuroimaging nicotinic acetylcholine receptors with PET. Eur. Neuropsychopharmacol. 2008, 18, 222-229.

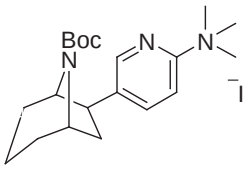
Deuther-Conrad W. et al. Norchloro-fluoro-homoepibatidine: specificity to neuronal nicotinic acetylcholine receptor subtypes in vitro. Farmaco, 2004, 59, 785-792.

Product Number	Product	Order number / Unit
3354	**(-)-Flubatine precursor (GMP)** **Precursor for (-)-[^{18}F]Flubatine** Manufactured according to GMP requirements for APIs for use in clinical trials (ICH Q7 chapter 19) $C_{20}H_{32}IN_3O_2$ **Molar Mass:** 473.39 [1421915-93-6] White to yellowish solid packaged in dark glass vials. **Purity:** **Certificates:** CoA with NMR and IR spectra, ESI-MS (identity); optical rotation; HPLC (purity); GC (residual solvents) **Chemical Name:** 5-((1R, 5S, 6S)-8-tert-butoxycarbonyl)-8-azabicyclo[3.2.1]octan-6-yl)-N,N,N-trimethylpyridin-2-aminium iodide **Synonymes:** ABX088, (-)-Flubatine precursor; (-)-NCFHEB precursor; (-)-5-(8-tert-butoxycarbonyl)-8-azabicyclo[3.2.1]octan-6-yl)-N,N,N-trimethylpyridin-2-aminium iodide **Literature:** Präkursorverbindungen für die Radiosynthese von [^{18}F]Norchlor-fluor-homoepibatidin. Patent DE 2011080118062700 Brust P. et al. In vivo measurement of nicotinic acetylcholine receptors with [^{18}F]norchloro-fluoro-homoepibatidine. Synapse 2008, 62, 205-218. Deuther-Conrad W. et al. Norchloro-fluoro-homoepibatidine (NCFHEB) - a promising radioligand for neuroimaging nicotinic acetylcholine receptors with PET. Eur. Neuropsychopharmacol. 2008, 18, 222-229. Deuther-Conrad W. et al. Norchloro-fluoro-homoepibatidine: specificity to neuronal nicotinic acetylcholine receptor subtypes in vitro. Farmaco, 2004, 59, 785-792.	**Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
3355	**(+)-Flubatine standard** **Reference standard for (+)-[^{18}F]Flubatine** $C_{12}H_{15}FN_2$ **Molar Mass:** 206.26 [845642-52-6] White to slightly grey solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra; HPLC **Chemical Name:** (1S,5R,6R)-6-(6-Fluoro-pyridin-3-yl)-8-aza-bicyclo[3.2.1]octane **Synonymes:** ABX064; (+)-Flubatine; (+)-NCFHEB; (+)-exo-6-(6-fluoro-pyridin-3-yl)-8-aza-bicyclo[3.2.1]octane **Literature:** Brust P. et al. In vivo measurement of nicotinic acetylcholine receptors with [^{18}F]norchloro-fluoro-homoepibatidine. Synapse 2008, 62, 205-218. Deuther-Conrad W. et al. Norchloro-fluoro-homoepibatidine (NCFHEB) - a promising radioligand for neuroimaging nicotinic acetylcholine receptors with PET. Eur. Neuropsychopharmacol. 2008, 18, 222-229. Deuther-Conrad et al. W. Norchloro-fluoro-homoepibatidine: specificity to neuronal nicotinic acetylcholine receptor subtypes in vitro. Farmaco, 2004, 59, 785-792.	**Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
3357	**(+)-Flubatine precursor** **Precursor for (+)-[^{18}F]Flubatine**	**Please inquire for customized filling and bulk quantities.**

$C_{20}H_{32}IN_3O_2$ **Molar Mass:** 473.39



CAS-RN not yet assigned

White to yellowish solid packaged in dark glass crimp cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H NMR spectrum; HPLC

Chemical Name:
5-((1S, 5R, 6R)-8-tert-butoxycarbonyl)-8-azabicyclo[3.2.1]octan-6-yl)-N,N,N-trimethylpyridin-2-aminium iodide

Synonymes:
ABX126; (+)-Flubatine precursor; (+)-NCFHEB precursor; (+)-5-(8-tert-butoxycarbonyl)-8-azabicyclo[3.2.1]octan-6-yl)-N,N,N-trimethylpyridin-2-aminium iodide

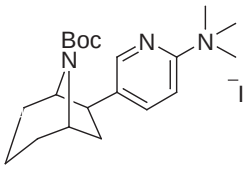
Literature:

Präkursorverbindungen für die Radiosynthese von [^{18}F]Norchlor-fluor-homoepibatidin. Patent DE 2011080118062700

Brust P. et al. In vivo measurement of nicotinic acetylcholine receptors with [^{18}F]norchloro-fluoro-homoepibatidine. Synapse 2008, 62, 205-218.

Deuther-Conrad W. et al. Norchloro-fluoro-homoepibatidine (NCFHEB) - a promising radioligand for neuroimaging nicotinic acetylcholine receptors with PET. Eur. Neuropsychopharmacol. 2008, 18, 222-229.

Deuther-Conrad W. et al. Norchloro-fluoro-homoepibatidine: specificity to neuronal nicotinic acetylcholine receptor subtypes in vitro. Farmaco, 2004, 59, 785-792.

Product Number	Product	Order number / Unit
3358	**(+)-Flubatine precursor (GMP)** **Precursor for (+)-[^{18}F]Flubatine** Manufactured according to GMP requirements for APIs for use in clinical trials (ICH Q7 chapter 19) $C_{20}H_{32}IN_3O_2$ **Molar Mass:** 473.39 CAS-RN not yet assigned White to yellowish solid packaged in dark glass vials. **Purity:** **Certificates:** CoA with NMR and IR spectra, ESI-MS (identity); optical rotation; HPLC (purity); GC (residual solvents) **Chemical Name:** 5-((1S, 5R, 6R)-8-tert-butoxycarbonyl)-8-azabicyclo[3.2.1]octan-6-yl)-N,N,N-trimethylpyridin-2-aminium iodide **Synonymes:** ABX126; (+)-Flubatine precursor; (+)-NCFHEB precursor; (+)-5-(8-tert-butoxycarbonyl)-8-azabicyclo[3.2.1]octan-6-yl)-N,N,N-trimethylpyridin-2-aminium iodide	**Please inquire for customized filling and bulk quantities.** 

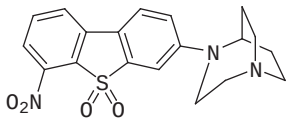
Literature:

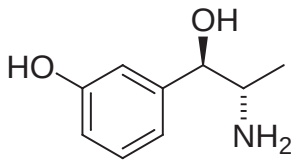
Präkursorverbindungen für die Radiosynthese von [^{18}F]Norchlor-fluor-homoepibatidin. Patent DE 2011080118062700

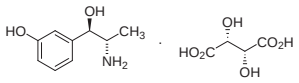
Brust P. et al. In vivo measurement of nicotinic acetylcholine receptors with [^{18}F]norchloro-fluoro-homoepibatidine. Synapse 2008, 62, 205-218.

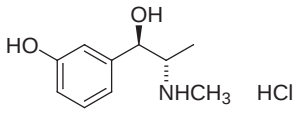
Deuther-Conrad W. et al. Norchloro-fluoro-homoepibatidine (NCFHEB) - a promising radioligand for neuroimaging nicotinic acetylcholine receptors with PET. Eur. Neuropsychopharmacol. 2008, 18, 222-229.

Deuther-Conrad W. et al. Norchloro-fluoro-homoepibatidine: specificity to neuronal nicotinic acetylcholine receptor subtypes in vitro. Farmaco, 2004, 59, 785-792.

Product Number	Product	Order number / Unit
3371	**ASEM precursor** **Precursor for [^{18}F]ASEM** $C_{19}H_{19}N_3O_4S$ **Molar Mass:** 385.44 [1456877-71-6] Reddish solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H spectrum **Chemical Name:** 3-(1,4-diazabicyclo[3.2.2]nonan-4-yl)-6-nitrodibenzo[b,d]thiophene 5,5-dioxide **Synonymes:** [^{18}F]ASEM precursor; [^{18}F]JHU82132 precursor; 4-(6-Nitro-5,5-dioxo-5H-5l6-dibenzothiophen-3-yl)-1,4-diaza-bicyclo[3.2.2]nonane **Literature:** Gao Y. et al. Derivatives of dibenzothiophene for positron emission tomography imaging of α7-nicotinic acetylcholine receptors. J. Med. Chem. 2013, 56, 7574-7589. Horti A.G. et al. ^{18}F-ASEM, a Radiolabeled Antagonist for Imaging the α7-Nicotinic Acetylcholine Receptor with PET. J. Nucl. Med. 2014, 55, 672-677. Wong D.F. et al. Human Brain Imaging of α7 nAChR with [^{18}F]ASEM: a New PET Radiotracer for Neuropsychiatry and Determination of Drug Occupancy. Mol. Imaging Biol. 2014, 16, 730-738. Horti A.G. Development of [^{18}F]ASEM, a specific radiotracer for quantification of the α7-nAChR with positron-emission tomography. Biochem. Pharmacol. 2015, 97, 566-575. Ravert H.T. et al. Microwave-assisted radiosynthesis of [^{18}F]ASEM, a radiolabeled α7-nicotinic acetylcholine receptor antagonist. J. Labelled Compd. Radiopharm. 2015, 58, 180-182.	**3371.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
3380	**Metaraminol (free base)** **Precursor for [^{11}C]Metahydroxyephedrine** $C_9H_{13}NO_2$ **Molar Mass:** 167.21 [54-49-9] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 90 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index names: Benzenemethanol, α-[(1S)-1-(amino)ethyl]-3-hydroxy- **Synonymes:** Metaraminol; m-Hydroxy-norephedrine; (-)-erythro-Metaraminol; (1-Aminoethyl)-3-hydroxybenzenemethanol; 1-(m-Hydroxyphenyl)-2-amino-1-propanol; 1-α-(1-Aminoethyl)-m-hydroxybenzylalcohol; 1-Metaraminol **Literature:** Någren K. et al. [^{11}C]Metaraminol, a false neurotransmitter. Preparation, metabolite studies and positron emission tomography investigation in monkey. Nucl. Med. Biol. 1996, 23, 221-227. Van Dort M.E. et al. Synthesis and carbon-11 labeling of the stereosisomers of meta-hydroxyephedrine (HED) and meta-hydroxypseudoephedrine (HPED). J. Labelled Compd. Radiopharm. 2000, 43, 603-612. Van Dort M.E. Direct Chromatographic resolution and Isolation of the four Stereoisomers of meta-Hydroxyphenyl-propanolamine. Chirality 1999, 11, 684-688.	**3380.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

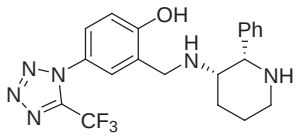
Product Number	Product	Order number / Unit
3390	**Metaraminol bitartrate** **Precursor for [^{11}C]Metahydroxyephedrine** $C_9H_{13}NO_2 \cdot C_4H_6O_6$ **Molar Mass:** 317.29 [33402-03-8] Colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index names: Benzenemethanol, α-[(1S)-1-aminoethyl]-3-hydroxy-, (αR)-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) **Synonymes:** Metaraminol bitartrate salt; m-Hydroxy-norephedrine bitartrate; (-)-1-α-(1-Aminoethyl)-m-hydroxybenzylalcohol bitartrate; (-)-Metraminol (+)-bitartrate; (-)-m-Hydroxyphenylpropanolamine bitartrate salt; (-)-Metaraminol bitartrate **Literature:** Van Dort M.E. et al. Synthesis and carbon-11 labeling of the stereosisomers of meta-hydroxyephedrine (HED) and meta-hydroxypseudoephedrine (HPED). J. Labelled Compd. Radiopharm. 2000, 43, 603-612. Någren K. et al. [^{11}C]Metaraminol, a false neurotransmitter. Preparation, metabolite studies and positron emission tomography investigation in monkey. Nucl. Med. Biol. 1996, 23, 221-227. Rosenspire K. et al. Synthesis and Preliminary Evaluation of Carbon-11-Meta-Hydroxyephedrine: A False Transmitter Agent for Heart Neuronal Imaging. J. Nucl. Med. 1990, 31, 1328-1334.	**3390.0002: 2 mg per vial** **Please inquire for customized filling and bulk quantities.** 

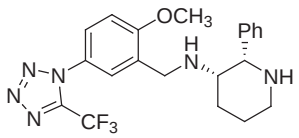
Product Number	Product	Order number / Unit
3400	**MHED hydrochloride** **Reference standard for [^{11}C]Metahydroxyephedrine** $C_{10}H_{15}NO_2 \cdot HCl$ **Molar Mass:** 217.69 [24493-89-8] Nearly colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index names: Benzenemethanol, 3-hydroxy-α-[(1S)-1-(methylamino)ethyl]-, hydrochloride, (αR)-; Benzenemethanol, 3-hydroxy-α-[1-(methylamino)ethyl]-, hydrochloride, [R-(R*,S*)]- **Synonymes:** (1R,2S)-(-)-meta-hydroxyephedrine hydrochloride; Benzenemethanol, 3-hydroxy-α-[(1S)-1-(methylamino)ethyl]-, hydrochloride, (αR)-; Benzenemethanol, 3-hydroxy-α-[1-(methylamino)ethyl]-, hydrochloride, [R-(R*,S*)]	**3400.0010: 10 mg per vial** **3400.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

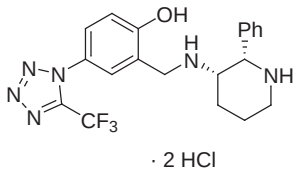
Literature:

Van Dort M.E. et al. Synthesis and carbon-11 labeling of the stereosisomers of meta-hydroxyephedrine (HED) and meta-hydroxypseudoephedrine (HPED). J. Labelled Compd. Radiopharm. 2000, 43, 603-612.

Van Dort M.E. et al. Synthesis of 3H-labeled sympathomimetic amines for neuronal mapping. J. Labelled Compd. Radiopharm. 1990, 28, 831-840.

Product Number	Product	Order number / Unit
3500	**Desmethyl-GR 205171** **Precursor for [^{11}C]GR 205171** $C_{20}H_{21}F_3N_6O$ **Molar Mass:** 418.42 [180574-25-8] Yellowish solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H, ^{13}C and ^{19}F NMR spectra **Chemical Name:** CA index name: Phenol, 2-[[[(2S,3S)-2-phenyl-3-piperidinyl]-amino]methyl]-4-[5-(trifluoromethyl)-1H-tetrazol-1-yl]- **Synonymes:** Phenol, 2-[[(2-phenyl-3-piperidinyl)amino]methyl]-4-[5-(trifluoromethyl)-1H-tetrazol-1-yl]-, (2S-cis)- **Literature:** Bergström M. et al. Brain uptake and receptor binding of two [^{11}C]labelled selective high affinity NK1-antagonists, GR203040 and GR205171-PET studies in rhesus monkey. Neuropharmacology 2000, 39, 664-670. Zamuner S. et al. Estimate the time varying brain receptor occupancy in PET imaging experiments using non-linear fixed and mixed effect modeling approach Nucl. Med. Biol. 2002, 29, 115-123. Bergström M. et al. A new application of pre-normalized principal component analysis for improvement of image quality and clinical diagnosis in human brain PET studies–clinical brain studies using [^{11}C]-GR205171, [^{11}C]-L-deuterium-deprenyl, [^{11}C]-5-Hydroxy-L-Tryptophan, [^{11}C]-L-DOPA and Pittsburgh Compound-B. Neuroimage 2006, 33, 588-598.	**3500.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
3510	**GR 205171** **Reference standard for [^{11}C]GR 205171** $C_{21}H_{23}F_3N_6O$ **Molar Mass:** 432.44 [168266-90-8] Yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H, ^{13}C and ^{19}F NMR spectra **Chemical Name:** CA index name: 3-Piperidinamine, N-[[2-methoxy-5-[5-(trifluormethyl)-1H-tetrazol-1-yl]phenyl]methyl]-2-phenyl, (2S,3S) **Synonymes:** 3-Piperidinamine, N-[[2-methoxy-5-[5-(trifluormethyl)-1H-tetrazol-1-yl]phenyl]methyl]-2-phenyl, (2S-cis-); Vofopitant **Literature:** Bergström M. et al. Brain uptake and receptor binding of two [^{11}C]labelled selective high affinity NK1-antagonists, GR203040 and GR205171-PET studies in rhesus monkey. Neuropharmacology 2000, 39, 664-670. Zamuner S. et al. Estimate the time varying brain receptor occupancy in PET imaging experiments using non-linear fixed and mixed effect modeling approach Nucl. Med. Biol. 2002, 29, 115-123. Bergström M. et al. A new application of pre-normalized principal component analysis for improvement of image quality and clinical diagnosis in human brain PET studies–clinical brain studies using [^{11}C]-GR205171, [^{11}C]-L-deuterium-deprenyl, [^{11}C]-5-Hydroxy-L-Tryptophan, [^{11}C]-L-DOPA and Pittsburgh Compound-B. Neuroimage 2006, 33, 588-598.	**3510.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

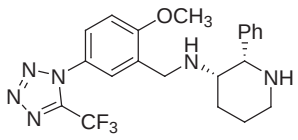
Product Number	Product	Order number / Unit
3520	**Desmethyl-GR 205171 Dihydrochloride** **Precursor for [^{11}C]GR 205171** $C_{20}H_{21}F_3N_6O \cdot 2\ HCl$ **Molar Mass:** 491.34 [262598-97-0] Yellowish solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H, ^{13}C and ^{19}F NMR spectra **Chemical Name:** CA index name: Phenol, 2-[[[(2S,3S)-2-phenyl-3-piperidinyl]-amino]methyl]-4-[5-(trifluoromethyl)-1H-tetrazol-1-yl]-, dihydrochloride **Synonymes:** Phenol, 2-[[(2-phenyl-3-piperidinyl)amino]methyl]-4-[5-(trifluoromethyl)-1H-tetrazol-1-yl]-, dihydrochloride, (2S-cis)-;	**3520.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**  · 2 HCl

Literature:

Bergström M. et al. Brain uptake and receptor binding of two [^{11}C]labelled selective high affinity NK1-antagonists, GR203040 and GR205171-PET studies in rhesus monkey. Neuropharmacology 2000, 39, 664-670.

Zamuner S. et al. Estimate the time varying brain receptor occupancy in PET imaging experiments using non-linear fixed and mixed effect modeling approach Nucl. Med. Biol. 2002, 29, 115-123.

Bergström M. et al. A new application of pre-normalized principal component analysis for improvement of image quality and clinical diagnosis in human brain PET studies–clinical brain studies using [^{11}C]-GR205171, [^{11}C]-L-deuterium-deprenyl, [^{11}C]-5-Hydroxy-L-Tryptophan, [^{11}C]-L-DOPA and Pittsburgh Compound-B. Neuroimage 2006, 33, 588-598.

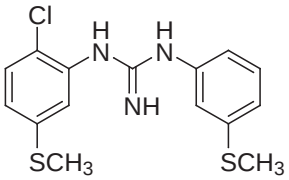
Product Number	Product	Order number / Unit
3530	**GR 205171 Dihydrochloride** **Reference standard for [^{11}C]GR 205171** $C_{21}H_{23}F_3N_6O \cdot 2\ HCl$ **Molar Mass:** 505.36 [168266-51-1] Off-white to yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H, ^{13}C and ^{19}F NMR spectra **Chemical Name:** CA index name: 3-Piperidinamine, N-[[2-methoxy-5-[5-(trifluoromethyl)-1H-tetrazol-1-yl]phenyl]methyl]-2-phenyl-, dihydrochloride, (2S,3S)- **Synonymes:** 3-Piperidinamine, N-[[2-methoxy-5-[5-(trifluoromethyl)-1H-tetrazol-1-yl]phenyl]methyl]-2-phenyl-, dihydrochloride, (2S-cis)-; GR 205171A; Vofopitant dihydrochloride	**3530.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**  · 2 HCl

Literature:

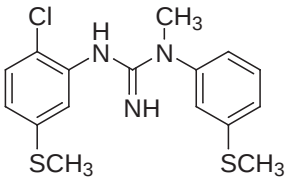
Bergström M. et al. Brain uptake and receptor binding of two [^{11}C]labelled selective high affinity NK1-antagonists, GR203040 and GR205171-PET studies in rhesus monkey. Neuropharmacology 2000, 39, 664-670.

Zamuner S. et al. Estimate the time varying brain receptor occupancy in PET imaging experiments using non-linear fixed and mixed effect modeling approach Nucl. Med. Biol. 2002, 29, 115-123.

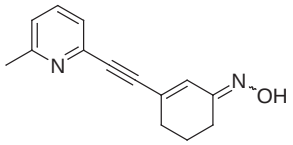
Bergström M. et al. A new application of pre-normalized principal component analysis for improvement of image quality and clinical diagnosis in human brain PET studies–clinical brain studies using [^{11}C]-GR205171, [^{11}C]-L-deuterium-deprenyl, [^{11}C]-5-Hydroxy-L-Tryptophan, [^{11}C]-L-DOPA and Pittsburgh Compound-B. Neuroimage 2006, 33, 588-598.

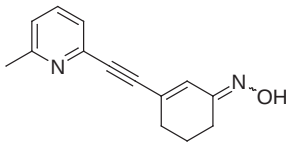
Product Number	Product	Order number / Unit
3540	**Desmethyl-CNS 5161** **Precursor for [^{11}C]CNS 5161** $C_{15}H_{16}ClN_3S_2$ **Molar Mass:** 337.89 [160754-78-9] Colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Guanidine, N-[2-chloro-5-(methylthio)phenyl]-N´-[3-(methylthio)phenyl]- **Synonymes:** N-(2-Chloro-5-methylsulfanyl-phenyl)-N´-(3-methylsulfanyl-phenyl)-guanidine	**3540.0001: 1 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:
Årstad E. et al. Synthesis and characterization of N-(2-chloro-5-methylthiophenyl)-N-(3-methylthiophenyl)-N-[^{11}C]methylguanidine [^{11}C]CNS 5161, a candidate PET tracer for functional imaging of NMDA receptors. J. Labelled Comp. Radiopharm. 2006, 49, 163-170.

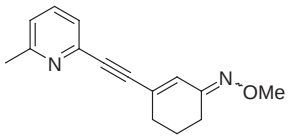
Product Number	Product	Order number / Unit
3550	**CNS 5161** **Reference standard for [^{11}C]CNS 5161** $C_{16}H_{18}ClN_3S_2$ **Molar Mass:** 351.92 [160754-76-7] Yellowish oil packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Guanidine, N´-[2-chloro-5-(methylthio)phenyl]-N-methyl-N-[3-(methylthio)phenyl]- **Synonymes:** N-(2-Chloro-5-methylthiophenyl)-N´-(3-methylthiophenyl)-N´-methylguanidine; CNS5161	**3350.0001: 1 mg per vial** **3350.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:
Årstad E. et al. Synthesis and characterization of N-(2-chloro-5-methylthiophenyl)-N-(3-methylthiophenyl)-N-[^{11}C]methylguanidine [^{11}C]CNS 5161, a candidate PET tracer for functional imaging of NMDA receptors. J. Labelled Comp. Radiopharm. 2006, 49, 163-170.

Product Number	Product	Order number / Unit
3560	**Desmethyl ABP688** **Precursor for [^{11}C/^{3}H]ABP688** Remark: Product consists of E/Z isomers of varying proportions $C_{14}H_{14}N_2O$ **Molar Mass:** 226.27 [849469-03-0] Colourless to yellowish solid packaged in dark glass vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: 2-Cyclohexen-1-one, 3-[(6-methyl-2-pyridinyl)ethynyl]-, oxime **Synonymes:** 3-(6-Methyl-pyridin-2-ylethynyl)-cyclohex-2-enone oxime **Literature:** Hintermann S. et al. ABP688, a novel selective and high affinity ligand for the labeling of mGlu5 receptors: Identification, in vitro pharmacology, pharmacokinetic and biodistribution studies. Bioorg. Med. Chem. 2007, 15, 903-914.	**3560.1000: 1000 mg per vial** **3560.0050: 50 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
3561	**Desmethyl ABP688 (GMP)** **Precursor for [^{11}C/^{3}H]ABP688** Manufactured according to GMP requirements for APIs for use in clinical trials (ICH Q7 chapter 19) Remark: Product consists of E/Z isomers of varying proportions $C_{14}H_{14}N_2O$ **Molar Mass:** 226.27 [849469-03-0] Colourless to yellowish solid packaged in dark glass vials. **Purity:** $\geq$ 97 % **Certificates:** CoA with NMR and IR spectra (identity), HPLC (purity), GC (residual solvents), ICP-MS (inorganic impurities) **Chemical Name:** CA index name: 2-Cyclohexen-1-one, 3-[(6-methyl-2-pyridinyl)ethynyl]-, oxime **Synonymes:** Desmethyl ABP688; 3-(6-Methyl-pyridin-2-ylethynyl)-cyclohex-2-enone oxime **Literature:** Hintermann S. et al. ABP688, a novel selective and high affinity ligand for the labeling of mGlu5 receptors: Identification, in vitro pharmacology, pharmacokinetic and biodistribution studies. Bioorg. Med. Chem. 2007, 15, 903-914.	**3561.0050: 50 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
3570	**ABP688** **Reference standard for [^{11}C/^{3}H]ABP688**	**Please inquire for customized filling and bulk quantities.**



Remark: Product consists of E/Z isomers of varying proportions

$C_{15}H_{16}N_2O$ **Molar Mass:** 240.30

[924298-51-1]

Yellow-green solid or oil packaged in dark glass crimp cap vials.

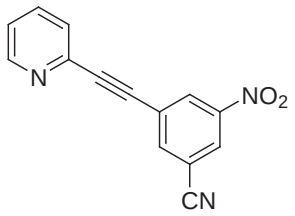
Purity: > 95 %

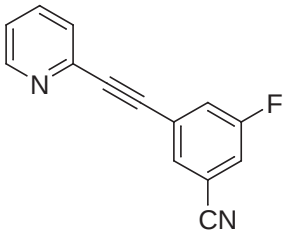
Certificates:
CoA; ^{1}H and ^{13}C NMR spectra

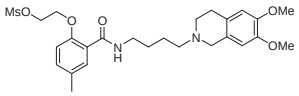
Chemical Name:
CA index name: 2-Cyclohexen-1-one,
3-[2-(6-methyl-2-pyridinyl)ethynyl]-,O-methyloxime

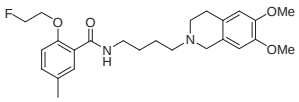
Synonymes:
3-(6-Methyl-pyridin-2-ylethynyl)-cyclohex-2-enone O-methyl-oxime

Literature:
Hintermann S. et al. ABP688, a novel selective and high affinity ligand for the labeling of mGlu5 receptors: Identification, in vitro pharmacology, pharmacokinetic and biodistribution studies. Bioorg. Med. Chem. 2007, 15, 903-914.

Product Number	Product	Order number / Unit
3571	**FPEB precursor** **Precursor for [^{18}F]FPEB (3-[^{18}F]Fluoro-5-(2-pyridinylethynyl)benzonitrile)** $C_{14}H_7N_3O_2$ **Molar Mass:** 249.22 [1031370-96-3] Slightly coloured solid packaged in dark glass crimp cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Benzonitrile, 3-nitro-5-[2-(2-pyridinyl)ethynyl]- **Synonymes:** 3-[2-(pyridin-2-yl)ethynyl]-5-nitrobenzonitrile; 3-Nitro-5-(pyridinylethynyl)benzonitrile; 3-Nitro-5-pyridin-2-ylethynyl-benzonitrile; Benzonitrile, 3-nitro-5-[2-(-pyridinyl)ethynyl]- **Literature:** Wang J.-Q. et al. Synthesis and Preliminary Biological Evaluation of 3-[^{18}F]Fluoro-5-(2-pyridinylethynyl)benzonitrile as a PET Radiotracer for Imaging Metrabotropic Glutamate Receptor Subtype 5. Synapse 2007, 61, 951-961. Alagille D. et al. Potent mGluR5 antagonists: Pyridyl and thiazolyl-ethynyl-3,5-disubstituted-phenyl series. Bioorg. Med. Chem. Let. 2011, 21, 3243-3247.	**Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
3572	**FPEB standard** **Reference standard for [^{18}F]FPEB (3-[^{18}F]Fluoro-5-(2-pyridinylethynyl)benzonitrile)** $C_{14}H_7FN_2$ **Molar Mass:** 222.22 [864063-10-5] Off-white solid packaged in dark glass vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: Benzonitrile, 3-fluoro-5-[2-(2-pyridinyl)ethynyl] **Synonymes:** 3-Fluoro-5-(2-pyrininylethynyl)benzonitril; 3-(2-(pyridin-2-yl)ethynyl)-5-fluorobenzonitrile; 3-Fluoro-5-pyridin-2-ylethynyl-benzonitrile **Literature:** Wang J.-Q. et al. Synthesis and Preliminary Biological Evaluation of 3-[^{18}F]Fluoro-5-(2-pyridinylethynyl)benzonitrile as a PET Radiotracer for Imaging Metrabotropic Glutamate Receptor Subtype 5. Synapse 2007, 61, 951-961.	**3572.0010: 10 mg per vial** **3572.0020: 20 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
3590	**ISOM** **Precursor for (N-[4-(6,7-Dimethoxy-3,4-dihydro-1H-isoquinolin-2-yl)-butyl]-2-(2-[^{18}F]fluoro-ethoxy)-5-methyl-benzamide** $C_{26}H_{36}N_2O_7S$ **Molar Mass:** 520.64 [945992-43-8] White to off-white solid packaged in dark glass vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Benzamide, N-[4-(3,4-dihydro-6,7-dimethoxy-2(1H)-isoquinolinyl)butyl]-5-methyl-2-[2-[(methylsulfonyl)oxy]ethoxy]- **Synonymes:** 2-(2-(4-(6,7-Dimethoxy-3,4-dihydroisoquinolin-2(1H)-yl)butylcarbamoyl)-4-methylphenoxy)-ethyl Methanesulfonate; Methanesulfonic acid 2-2-[4-(6,7-dimethoxy-3,4-dihydro-1H-isoquinolin-2-yl)-butylcarbamoyl]-4-methyl-phenoxy-ethyl ester **Literature:** Tu Z. et al. Fluorine-18-Labeled Benzamide Analogues for Imaging the σ2 Receptor Status of Solid Tumors with Positron Emission Tomography. J. Med. Chem. 2007, 50, 3194-3204.	**3590.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

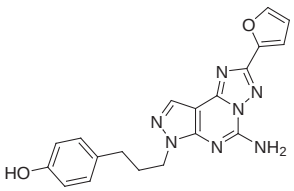
Product Number	Product	Order number / Unit
3591	**ISOF** **Reference standard for (N-[4-(6,7-Dimethoxy-3,4-dihydro-1H-isoquinolin-2-yl)-butyl]-2-(2-[^{18}F]fluoro-ethoxy)-5-methyl-benzamide** $C_{25}H_{33}FN_2O_4$ **Molar Mass:** 444.54 [851705-46-9] White to yellowish solid packaged in dark glass vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: Benzamide, N-[4-(3,4-dihydro-6,7-dimethoxy-2(1H)-isoquinolinyl)butyl]-2-(2-fluoroethoxy)-5-methyl- **Synonymes:** N-[6,7-Dimethoxy-3,4-dihydro-1H-isoquinolin-2-yl-butyl]-2-(2-fluoro-ethoxy)-5-methyl-benzamide; N-[4-(6,7-Dimethoxy-3,4-dihydro-1H-isoquinolin-2-yl)-butyl]-2-(2-fluoro-ethoxy)-5-methyl-benzamide **Literature:** Tu Z. et al. Fluorine-18-Labeled Benzamide Analogues for Imaging the σ2 Receptor Status of Solid Tumors with Positron Emission Tomography. J. Med. Chem. 2007, 50, 3194-3204.	**3591.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
3700	**Desmethyl-SCH-442416** **Precursor for [^{11}C]SCH 442416**	**3700.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_{19}H_{17}N_7O_2$ **Molar Mass:** 375.38

[188112-92-7]

Colourless to yellowish solid packaged in dark glass screw cap vials.



Purity: > 95 %

Certificates:
CoA; ^{1}H NMR spectrum

Chemical Name:
CA index name: Phenol, 4-[3-[5-amino-2-(2-furanyl)-7H-pyrazolo[4,3-e][1,2,4]triazolo[1,5-c]pyrimidin-7-yl]propyl]-

Synonymes:
5-Amino-7-[3-(4-hydroxyphenyl)propyl]-2-(2-furyl)pyrazolo[4,3-e]-1,2,4-triazolo[1,5-c]pyrimidine

Literature:

Baraldi P.G. et al. 7-Substituted 5-Amino-2-(2-furyl)pyrazolo[4,3-e]-1,2,4-triazolo[1,5-c]pyrimidines as A2A Adenosine Receptor Antagonists: A Study on the Importance of Modifications at the Side Chain on the Activity and Solubility. J. Med. Chem. 2002, 45, 115-126.

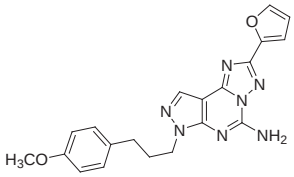
Baraldi P.G. et al. Design, Synthesis, and Biological Evaluation of a Second Generation of Pyrazolo[4,3-e]-1,2,4-triazolo[1,5-c]pyrimidines as Potent and Selective A2A Adenosine Receptor Antagonists. J. Med. Chem. 1998, 41, 2126-2133.

Product Number	Product	Order number / Unit
3710	**SCH-442416** **Reference standard for [^{11}C]SCH 442416**	**3710.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_{20}H_{19}N_7O_2$ **Molar Mass:** 389.41

[316173-57-6]

Colourless to yellowish solid packaged in dark glass screw cap vials.



Purity: > 95 %

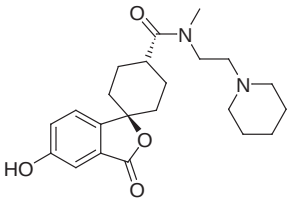
Certificates:
CoA; ^{1}H NMR spectrum

Chemical Name:
CA index name:
7H-Pyrazolo[4,3-e][1,2,4]triazolo[1,5-c]pyrimidin-5-amine, 2-(2-furanyl)-7-[3-(4-methoxyphenyl)propyl]-

Synonymes:
5-Amino-7-[3-(4-methoxy)phenylpropyl]-2-(2-furyl)-pyrazolo[4,3-e]-1,2,4-triazolo[1,5-c]pyrimidine

Literature:

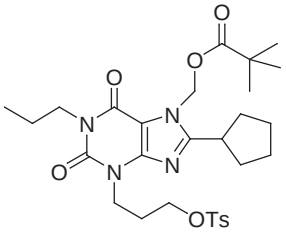
Todde S. et al. Design, Radiosynthesis, and Biodistribution of a New Potent and Selective Ligand for in Vivo Imaging of the Adenosine A2A Receptor System Using Positron Emission Tomography. J. Med. Chem. 2000, 43, 4359-4362.

Product Number	Product	Order number / Unit
3720	**Desmethyl-MK-8278** **Precursor for [^{11}C]MK-8278** $C_{22}H_{30}N_2O_4$ **Molar Mass:** 386.48 [879368-41-9] Colourless to off-white foam/solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum; HPLC **Chemical Name:** Spiro[cyclohexane-1,1'(3'H)-isobenzofuran]-4-carboxamide, 5'-hydroxy-N-methyl-3'-oxo-N-[2-(1-piperidinyl)ethyl]-, (1alpha,4beta)- **Synonymes:** trans-5'-Hydroxy-3'-oxo-N-methyl-N-(2-piperidin-1-ylethyl)-spiro[cyclohexane-1,1'-(3'-H)-isobenzofuran]-4-carboxamide; [^{11}C]MK-8278 precursor	**3720.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Van Laere K. J. et al. 11C-MK-8278 PET as a Tool for Pharmacodynamic Brain Occupancy of Histamine 3 Receptor Inverse Agonists. J. Nucl. Med. 2014, 55, 65-72.

Hamill T. G. et al. Inverse Agonist Histamine H3 Receptor PET Tracers Labelled With Carbon-11 or Fluorine-18. Synapse 2009, 63, 1122-1132.

Product Number	Product	Order number / Unit
3750	**CPTPX** **Precursor for [^{18}F]CPFPX** **8-Cyclopentyl-3-(3-[^{18}F]fluoropropyl)-1-propylxanthine** $C_{29}H_{40}N_4O_7S$ **Molar Mass:** 588.72 [478173-67-0] Colourless solid packaged in dark glass vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Propanoic acid, 2,2-dimethyl-, [8-cyclopentyl-1,2,3,6-tetrahydro-3-[3-[[(4-methylphenyl)sulfonyl]oxy]propyl]-2,6-dioxo-1-propyl-7H-purin-7-yl]methyl ester **Synonymes:** 2,2-Dimethyl-propionic acid 8-cyclopentyl-2,6-dioxo-1-propyl-3-[3-(toluene-4-sulfonyloxy)-propyl]-1,2,3,6-tetrahydro-purin-7-ylmethyl ester; 8-Cyclopentyl-3-(3-tosyloxypropyl)-7-pivaloyloxymethyl-1-propylxanthine	**3750.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

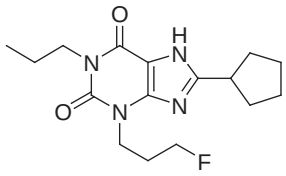
Literature:

Holschbach M. H. et al. Synthesis and Evaluation of No-Carrier-Added 8-Cyclopentyl-3-(3-[^{18}F]fluoropropyl)-1-propylxanthine ([^{18}F]CPFPX): A Potent and Selective A1-Adenosine Receptor Antagonist for in Vivo Imaging. J. Med. Chem. 2002, 45, 5150-5156.

Bauer A. et al. Evaluation of ^{18}F-CPFPX, a Novel Adenosine A1 Receptor Ligand: In Vitro Autoradiography and High-Resolution Small Animal PET. J. Nucl. Med. 2003, 44, 1682-1689.

Matusch A. et al. Metabolism of the A1 adenosine receptor PET ligand [^{18}F]CPFPX by CYP1A2: implications for bolus/infusion PET studies. Nucl. Med. Biol. 2006, 33, 891-898.

Elmenhorst D. et al. Caffeine Occupancy of Human Cerebral A1 Adenosine Receptors: In Vivo Quantification with ^{18}F-CPFPX and PET. J. Nucl. Med. 2012, 53, 1723-1729.

Product Number	Product	Order number / Unit
3751	**CPFPX** **Reference standard for [^{18}F]CPFPX** **8-Cyclopentyl-3-(3-[^{18}F]fluoropropyl)-1-propylxanthine** $C_{16}H_{23}FN_4O_2$ **Molar Mass:** 322.38 [200557-18-2] Colourless to off-white solid packaged in dark glass vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 1H-Purine-2,6-dione, 8-cyclopentyl-3-(3-fluoropropyl)-3,9-dihydro-1-propyl- **Synonymes:** 8-Cyclopentyl-3-(3-fluoro-propyl)-1-propyl-3,7-dihydro-purine-2,6-dione; 8-Cyclopentyl-3-(3-[^{18}F]fluoropropyl)-1-propylxanthine	**3751.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

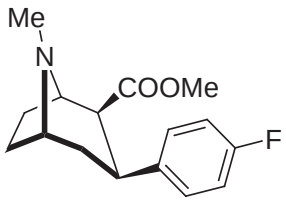
Literature:

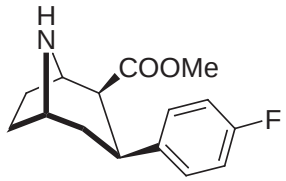
Holschbach M. H. et al. Synthesis and Evaluation of No-Carrier-Added 8-Cyclopentyl-3-(3-[^{18}F]fluoropropyl)-1-propylxanthine ([^{18}F]CPFPX): A Potent and Selective A1-Adenosine Receptor Antagonist for in Vivo Imaging. J. Med. Chem. 2002, 45, 5150-5156.

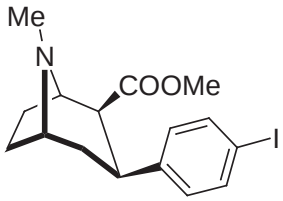
Bauer A. et al. Evaluation of ^{18}F-CPFPX, a Novel Adenosine A1 Receptor Ligand: In Vitro Autoradiography and High-Resolution Small Animal PET. J. Nucl. Med. 2003, 44, 1682-1689.

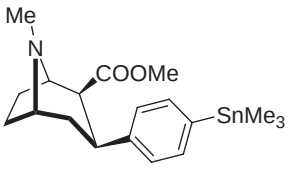
Matusch A. et al. Metabolism of the A1 adenosine receptor PET ligand [^{18}F]CPFPX by CYP1A2: implications for bolus/infusion PET studies. Nucl. Med. Biol. 2006, 33, 891-898.

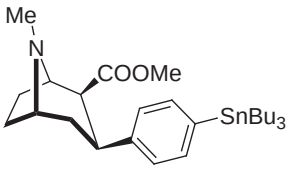
Elmenhorst D. et al. Caffeine Occupancy of Human Cerebral A1 Adenosine Receptors: In Vivo Quantification with ^{18}F-CPFPX and PET. J. Nucl. Med. 2012, 53, 1723-1729.

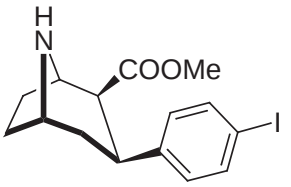
Product Number	Product	Order number / Unit
4000	**(-)-2-beta-Carbomethoxy-3-beta-(4-fluorophenyl)tropane** **Reference standard for [^{11}C]-beta-CFT** $C_{16}H_{20}FNO_2$ **Molar Mass:** 277.33 [50370-56-4] Colourless crystals packaged in dark glass crimp cap vials (4000.0001) or screw cap vials (4000.0025). **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 3-(4-fluorophenyl)-8-methyl-, methyl ester, (1R,2S,3S,5S)- **Synonymes:** β-CFT; 2-CFT; β-Cft; WIN35428 **Literature:** Calligaro D.O. et al. Central and peripheral cocaine receptors. J. Pharmacol. Exp. Ther. 1987, 243, 61-68. Reith M.E. et al. Saturable [^{3}H]cocaine binding in central nervous system of mouse. Life Sci. 1980, 27, 1055-1062.	**4000.0001: 1 mg per vial** **4000.0025: 25 mg per vial** **Please inquire for customized filling and bulk quantities.** 

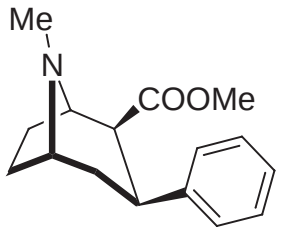
Product Number	Product	Order number / Unit
4020	**(-)-2-beta-Carbomethoxy-3-beta-(4-fluorophenyl)nortropane** **Precursor for [^{11}C]beta-CFT** $C_{15}H_{18}FNO_2$ **Molar Mass:** 263.31 [127648-30-0] Colourless to yellowish solid packaged in dark glass crimp cap vials (4020.0001) or screw cap vials (4020.0025). **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 3-(4-fluorophenyl), methyl ester, (1R,2S,3S,5S)- **Synonymes:** nor-β-CFT; nor-2-CFT **Literature:** Milius R.A. et al. Synthesis and receptor binding of N-substituted tropane derivatives. High-affinity ligands for the cocaine receptor. J. Med. Chem. 1991, 34, 1728-1731. Nagren K. et al. Comparison of [^{11}C]methyl triflate and [^{11}C]methyl iodide in the synthesis of PET radioligands such as [^{11}C]beta-CIT and [^{11}C]beta-CFT. Nucl. Med. Biol. 1995, 22, 965-979.	**4020.0001: 1 mg per vial** **4020.0025: 25 mg per vial** **Please inquire for customized filling and bulk quantities.** 

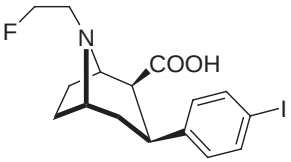
Product Number	Product	Order number / Unit
4030	**(-)-2-beta-Carbomethoxy-3-beta-(4-iodophenyl)tropane** **Reference standard for [^{11}C]beta-CIT** **Precursor for [*I]beta-CIT** $C_{16}H_{20}INO_2$ **Molar Mass:** 385.24 [135416-43-2] Colourless to yellowish crystals packaged in dark glass crimp cap vials (4030.0001) or screw cap vials (4030.0025). **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 3-(4-iodophenyl)-8-methyl, methyl ester, (1R,2S,3S,5S)- **Synonymes:** β-CIT; 2-CIT **Literature:** Muller L. et al. [^{11}C]-beta-CIT, a cocaine analogue. Preparation, autoradiography and preliminary PET investigations. Nucl. Med. Biol .1993, 20, 249-255. Ametamey S.M. et al. Synthesis of nor-beta-CIT, beta-CIT and trimethylstannyl-beta-CT. Nucl. Med. Biol. 1995, 22, 959-964.	**4030.0001: 1 mg per vial** **4030.0025: 25 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
4040	**TMS-CT** **Precursor for [^{18}F]CFT** **Precursor for [*I]beta-CIT** $C_{19}H_{29}NO_2Sn$ **Molar Mass:** 422.15 [158111-10-5] Colourless crystals packaged in dark glass crimp cap vials (4040.0001) or screw cap vials (4040.0025). **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{119}Sn NMR spectra **Chemical Name:** CA index name: 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 8-methyl-3-[4-(trimethylstannyl)phenyl]-, methyl ester, (1R,2S,3S,5S)- **Synonymes:** (-)-2-β-Carbomethoxy-3β-[4-(trimethylstannyl)]phenyltropane; Trimethylstannyl-β-CT **Literature:** Ametamey S.M. et al. Synthesis of nor-beta-CIT, beta-CIT and trimethylstannyl-beta-CT. Nucl. Med. Biol. 1995, 22, 959-964. Zea-Ponce Y. et al. Simplified multidose preparation of iodine-123-β-CIT: a marker for dopamine transporters. J. Nucl. Med.1995, 36, 525-529. Carpinelli A. et al. Radiosynthesis of [^{123}I]-beta-CIT, a selective ligand for the study of the dopaminergic and serotoninergic systems in human brain. Appl. Rad.Isot. 2001, 54, 93-95.	**4040.0001: 1 mg per vial** **4040.0025: 25 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
4041	**TBS-CT** **Precursor for [^{18}F]CFT** **Precursor for [*I]beta-CIT** $C_{28}H_{47}NO_2Sn$ **Molar Mass:** 548.39 [136794-88-2] Highly viscous oil packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{119}Sn NMR spectra **Chemical Name:** CA index name: 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 8-methyl-3-[4-(tributylstannyl)phenyl]-, methyl ester, (1R,2S,3S,5S)- **Synonymes:** (-)-2-β-Carbomethoxy-3β-[4-(tributylstannyl)]phenyltropane; 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 8-methyl-3-[4-(tributylstannyl)phenyl]-, methyl ester, [1R-(exo,exo)]-Tributylstannyl-β-CT **Literature:** Loch Ch. et al. Synthesis of 2β-carbomethoxy-3β-(4-[^{76}Br]bromophenyl)tropane ([^{76}Br]beta-CBT), a PET tracer for in vivo imaging of the dopamine uptake sites. J. Labelled Comp. Radiopharm. 1995, 36, 385-92. Baldwin R.M. et al. Evaluation of the monoamine uptake site ligand [^{123}I]methyl 3β(4-iodophenyl)tropane-2β-carboxylate ([^{123}I]β-CIT) in nonhuman primates: Pharmacokinetics, biodistribution and SPECT brain imaging co-registered with MRI. Nucl. Med. Biol. 1993, 20, 597-606. Neumeyer J.L. et al. [^{123}I]-2β-carbomethoxy-3β-(4-iodophenyl)-tropane: high-affinity SPECT (single photon emission computed tomography) radiotracer of monoamine reuptake sites in brain. J. Med. Chem. 1991, 34, 3144-6.	**4041.0001: 1 mg per vial** **4041.0025: 25 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
4050	**(-)-2-beta-Carbomethoxy-3-beta-(4-iodophenyl)nortropane** **Precursor for [^{11}C]beta-CIT** Caution, hygroscopic! $C_{15}H_{18}INO_2$ **Molar Mass:** 371.21 [136794-87-1] Colourless to yellowish crystals packaged in dark glass crimp cap vials (4050.0001) or screw cap vials (4050.0025). **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 3-(4-iodophenyl), methyl ester, (1R,2S,3S,5S)- **Synonymes:** nor-β-CIT; nor-2-CIT **Literature:** Muller L. et al. [^{11}C]-beta-CIT, a cocaine analogue. Preparation, autoradiography and preliminary PET investigations. Nucl. Med. Biol .1993, 20, 249-255. Ametamey S.M. et al. Synthesis of nor-beta-CIT, beta-CIT and trimethylstannyl-beta-CT. Nucl. Med. Biol. 1995, 22, 959-964.	**4050.0001: 1 mg per vial** **4050.0025: 25 mg per vial** **Please inquire for customized filling and bulk quantities.** 

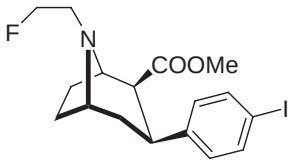
Product Number	Product	Order number / Unit
4060	**(-)-2-beta-Carbomethoxy-3-beta-(phenyl)tropane** **Reference standard for [^{11}C]-beta-CPT** $C_{16}H_{21}NO_2$ **Molar Mass:** 259.34 [50372-80-0] Colourless crystals packaged in dark glass crimp cap vials (4060.0001) or screw cap vials (4060.0025). **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 3-phenyl-8-methyl-, methyl ester, (1R,2S,3S,5S)- **Synonymes:** β-CPT; 2-CPT; WIN 35065 **Literature:** Ritz M.C. et al. [^{3}H]WIN 35,065-2: a ligand for cocaine receptors in striatum. J. Neurochem. 1990, 55, 1556-1562. Scheffel U. et al. Cocaine receptors: In Vivo Labelling with 3H-(-) cocaine, 3H-WIN 35,065-2, and 3H-WIN 35,428. Synapse 1989, 4, 390-392.	**4060.0001: 1 mg per vial** **4060.0025: 25 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
4100	**CITFES** **Precursor for [^{11}C]beta-CITFE** $C_{16}H_{19}FINO_2$ **Molar Mass:** 403.23 [180045-77-6] Colourless to nearly colourless solid packaged in dark glass crimp cap vials (4100.0001) or screw cap vials (4100.0010). **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 8-(2-fluoroethyl)-3-(4-iodophenyl)-, (1R,2S,3S,5S)- **Synonymes:** N-2-fluoroethyl-3-β-(4-iodophenyl)nortropane-2-β-carboxylic acid; β-CIT-FE acid **Literature:** Antonini A. et al. The status of dopamine nerve terminals in Parkinson´s disease and essential tremor: a PET study with the tracer [^{11}C]FE-CIT. Neurol. Sci. 2001, 22, 47-48. Halldin C. et al. [^{11}C]beta-CIT-FE, a radioligand for quantitation of the dopamine transporter in the living brain using positron emission tomography. Synapse 1996, 22, 386-390. Baldwin R.M. et al. Regional brain uptake and pharmacokinetics of [^{123}I]N-ω-fluoroalkyl-2-β-carboxy-3-β-(4-iodophenyl)-nortropane esters in baboons. Nucl. Med. Biol. 1995, 22, 211-209.	**4100.0001: 1 mg per vial** **4100.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
4110	**CITFE** **Reference standard for [^{18}F]beta-CITFE** **Reference standard for [*I]beta-CITFE**	**4110.0001: 1 mg per vial** **4110.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_{17}H_{21}FINO_2$ **Molar Mass:** 417.26

[155798-01-9]



Colourless to yellowish crystals packaged in dark glass screw cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H and ^{19}F NMR spectra

Chemical Name:
CA index name: 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 8-(2-fluoroethyl)-3-(4-iodophenyl)-, methyl ester, (1R,2S,3S,5S)-

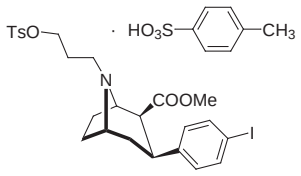
Synonymes:
N-2-fluoroethyl-3-β-(4-iodophenyl)nortropane-2-β-carboxylic acid methyl ester; CITFE; β-CIT-FE

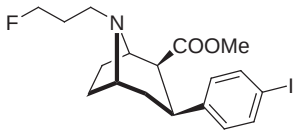
Literature:

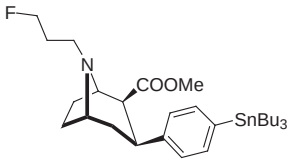
Antonini A. et al. The status of dopamine nerve terminals in Parkinson´s disease and essential tremor: a PET study with the tracer [^{11}C]FE-CIT. Neurol. Sci. 2001, 22, 47-48.

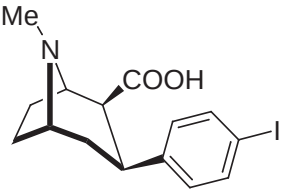
Halldin C. et al. [^{11}C]beta-CIT-FE, a radioligand for quantitation of the dopamine transporter in the living brain using positron emission tomography. Synapse 1996, 22, 386-390.

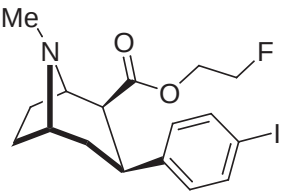
Baldwin R.M. et al. Regional brain uptake and pharmacokinetics of [^{123}I]N-ω-fluoroalkyl-2-β-carboxy-3-β-(4-iodophenyl)-nortropane esters in baboons. Nucl. Med. Biol. 1995, 22, 211-209.

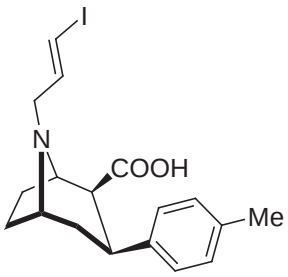
Product Number	Product	Order number / Unit
4122	**CITTP Tosylate** **Precursor for [^{18}F]beta-CITFP** $C_{25}H_{30}INO_5S \cdot C_7H_8O_3S$ **Molar Mass:** 583.48 [186381-39-5] (free base) Colourless to off-white solid packaged in dark glass screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 3-(4-iodophenyl)-8-[3-[[(4-methylphenyl)sulfonyl]oxy]propyl]-, methyl ester, (1R,2S,3S,5S)-, salt with 4-methylbenzenesulfonic acid (1:1) **Synonymes:** 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 3-(4-iodophenyl)-8-[3-[[(4-methylphenyl)sulfonyl]oxy]propyl]-, methyl ester, [1R-(exo,exo)]-, tosylate salt; N-2-(3´-tosyloxy)propyl-3-β-(4-iodophenyl)nortropane-2-β-carboxylic acid methyl ester, tosylate salt; β-CIT-TP tosylate, CITTP tosylate **Literature:** Lee S.J. et al. One-step high-radiochemical-yield synthesis of [^{18}F]FP-CIT using a protic solvent system. Nucl. Med. Biol. 2007, 34, 345-351.	**4122.0004: 4 mg per vial** **4122.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
4130	**CITFP** **Reference standard for [^{18}F]beta-CITFP** **Reference standard for [*I]beta-CITFP** $C_{18}H_{23}FINO_2$ **Molar Mass:** 431.28 [155797-99-2] Colourless or yellowish crystals packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 8-(3-fluoropropyl)-3-(4-iodophenyl)-, methyl ester, (1R,2S,3S,5S)- **Synonymes:** N-2-fluoropropyl-3-β-(4-iodophenyl)nortropane-2-β-carboxylic acid methyl ester; β-CIT-FP **Literature:** Baldwin R.M. et al. Regional brain uptake and pharmacokinetics of [^{123}I]N-ω-fluoroalkyl-2-β-carboxy-3-β-(4-iodophenyl)-nortropane esters in baboons. Nucl. Med. Biol. 1995, 22, 211-209.	**4130.0001: 1 mg per vial** **4130.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

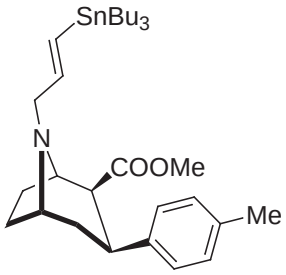
Product Number	Product	Order number / Unit
4132	**TBSCT-FP** **Precursor for [^{123}I]beta-CITFP** $C_{30}H_{50}FNO_2Sn$ **Molar Mass:** 594.43 [479642-48-3] Colourless to yellowish oil packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H, ^{19}F and ^{119}Sn NMR spectra **Chemical Name:** CA index name: 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 8-(3-fluoropropyl)-3-[4-(tributylstannyl)phenyl]-, methyl ester, (1R,2S,3S,5S)- **Synonymes:** 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 3-[(4-tributylstannyl)phenyl]-8-[3-(4-fluoropropyl)-, methyl ester, [1R-(exo,exo)]-; N-2-fluoropropyl-3-β-[(4-tributylstannyl)phenyl]nortropane-2-β-carboxylic acid methyl ester; TBS-CT-FP **Literature:** Fang P. et al. Synthesis and labeling of $^{125/131}$I-FP-β-CIT as a dopamine transporter imaging agent. Hejishu 2002, 25, 113-117.	**4132.0001: 1 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
4140	**beta-CIT acid** **Precursor for 2-[^{18}F]Fluoroethyl-beta-CIT (ester)** $C_{15}H_{18}INO_2$ **Molar Mass:** 371.21 [141807-58-1] Colourless solid packaged in dark glass crimp cap vials (4140.0001) or screw cap vials (4140.0025). **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: 8-Azabicyclo[3.2.1] octane-2-carboxylic acid, 3-(4-iodophenyl)-8-methyl-, (1R,2S,3S,5S)- **Synonymes:** 3β-(4´-iodophenyl)tropan-2β-carboxylic acid; 3-Deoxy-3-(p-iodophenyl)-α-ecgonine **Literature:** Gu X.-H. et al. Synthesis and Evaluation of a series of novel N- or O-fluoroalkyl derivates of Tropane: potential positron emission tomography (PET) imaging agents for the dopamine transporter. Bioorg. Med. Chem. Lett. 2001, 11, 3049-3053.	**4140.0001: 1 mg per vial** **4140.0025: 25 mg per vial** **Please inquire for customized filling and bulk quantities.** 

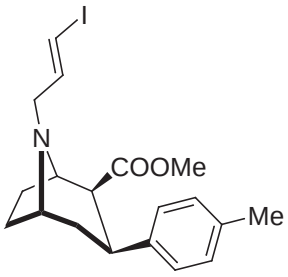
Product Number	Product	Order number / Unit
4150	**2-FE-beta-CIT** **Reference standard for 2-[^{18}F]Fluoroethyl-beta-CIT (ester)** $C_{17}H_{21}FINO_2$ **Molar Mass:** 417.26 [398497-81-9] Nearly colourless solid packaged in dark glass crimp cap vials (4150.0001) or screw cap vials (4150.0025). **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 3-(4-iodophenyl)-8-methyl-, 2-fluoroethyl ester, (1R,2S,3S,5S)- **Synonymes:** 3β-(4´-iodophenyl)tropan-2β-carboxylic acid, 2-fluoro-ethyl ester; 2-Fluorethyl-β-CIT **Literature:** Gu X.-H. et al. Synthesis and Evaluation of a series of novel N- or O-fluoroalkyl derivates of Tropane: potential positron emission tomography (PET) imaging agents for the dopamine transporter. Bioorg. Med. Chem. Lett. 2001, 11, 3049-3053.	**4150.0001: 1 mg per vial** **4150.0025: 25 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
4160	**PE2I acid** **Precursor for [^{11}C]PE2I** $C_{18}H_{22}INO_2$ **Molar Mass:** 411.28 [311351-26-5] Colourless to yellowish solid packaged in dark glass crimp cap vials (4160.0001) or screw cap vials (4160.0010). **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 8-[(2E)-3-iodo-2-propenyl]-3-(4-methylphenyl)-, (1R,2S,3S,5S)- **Synonymes:** (E)-N-(3-Iodoprop-2-enyl)-2β-carboxy-3β-(p-tolyl)-nortropan; Nor-PE2I	**4160.0001: 1 mg per vial** **4160.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:
Dolle F. et al. Highly efficient synthesis of [^{11}C]PE2I, a selective radioligand for the quantification of the dopamine transporter using PET. J. Labelled Compd. Radiopharm. 2000, 43, 997-1004.

Product Number	Product	Order number / Unit
4165	**PE2I tin precursor** **Precursor for [^{123}I]PE2I ([^{123}I](E)-N-(3-iodoprop-2-enyl)-2β-carbomethoxy-3β-(4´-methyl-phenyl)nortropane)** $C_{31}H_{51}NO_2Sn$ **Molar Mass:** 588.45 [188680-65-1] Colourless oil packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{119}Sn NMR spectra **Chemical Name:** CA index name: 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 3-(4-methylphenyl)-8-[(2E)-3-(tributylstannyl)-2-propen-1-yl]-, methyl ester, (1R,2S,3S,5S)- **Synonymes:** N-[3-(Tri-n-butylstannyl)prop-(2E)-enyl]-2β-carbomethoxy-3β-(4´-methylphenyl)nortropane	**Please inquire for customized filling and bulk quantities.** 

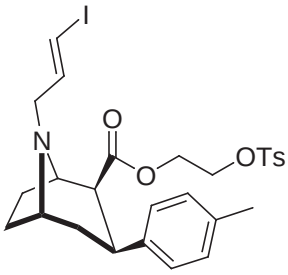
Literature:
Edmond P. et al. Synthesis and Ligand Binding of Nortropane Derivatives: N-Substituted 2β-Carbomethoxy-3β-(4´-iodophenyl)nortropane and N-(3-Iodoprop-(2E)-enyl)-2β-carbomethoxy-3β-(3´,4´-disubstituted phenyl)nortropane. New High-Affinity and Selective Compounds for the Dopamine Transporter. J. Med. Chem. 1997, 40, 1366-1372.

Product Number	Product	Order number / Unit
4170	**PE2I** **Reference standard for [^{11}C]PE2I** $C_{19}H_{24}INO_2$ **Molar Mass:** 425.3 [188680-71-9] Colourless to yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 8-[(2E)-3-iodo-2-propenyl]-3-(4-methylphenyl)-, methyl ester, (1R,2S,3S,5S)- **Synonymes:** (E)-N-3-Iodoprop-2-enyl)-2β-carbomethoxy-3β-(p-tolyl)-nortropane	**4170.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Halldin C. et al. [^{11}C]PE2I: a highly selective radioligand for PET examination of the dopamine transporter in monkey and human brain. Eur. J. Nucl. Med. Mol. Imaging 2003, 30, 1220-1230.

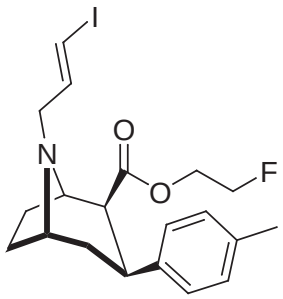
Emond P. et al. Synthesis and Ligand Binding of Nortropane Derivatives: N-Substituted 2β-Carbomethoxy-3β-(4´-iodophenyl)-nortropane and N-(3-Iodoprop-(2E)-enyl)-2β-carbomethoxy-3β-(3´,4´-disubstituted phenyl)nortropane. New High-Affinity and Selective Compounds for the Dopamine Transporter. J. Med. Chem. 1997, 40, 1366-1372.

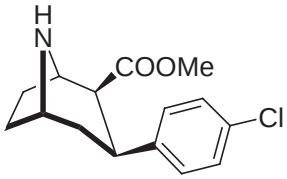
Product Number	Product	Order number / Unit
4172	**TEO-PE2I** **Precursor for [^{18}F]FE-PE2I** $C_{27}H_{32}INO_5S$ **Molar Mass:** 609.52 [1391711-43-5] Yellow solid packaged in dark glass vials. **Purity:** > 90 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 8-[(2E)-3-iodo-2-propen-1-yl]-3-(4-methylphenyl)-, 2-[[(4-methylphenyl)sulfonyl]oxy]ethyl ester, (1R,2S,3S,5S)- **Synonymes:** (2-(tosyloxy)ethyl-8-[(2E)-3-iododprop-2-en-1-yl]-3-(4-tolyl)-tropane-2-carboxylate	**4172.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

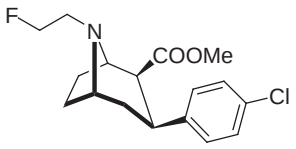
Literature:

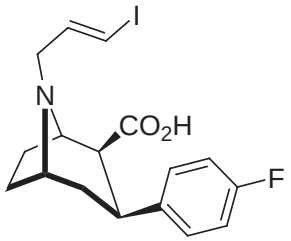
Stepanov V. et al. An efficient one-step radiosynthesis of [^{18}F]FE-PE2I, a PET radioligand for imaging of dopamine transporters. J. Labelled Compd. Radiopharm. 2012, 55, 206-210.

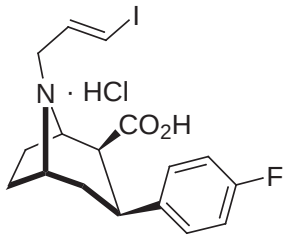
n.a.

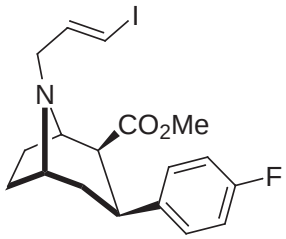
Product Number	Product	Order number / Unit
4173	**FE-PE2I** **Referece standard for [^{18}F]FE-PE2I** $C_{20}H_{25}FINO_2$ **Molar Mass:** 457.32 [949091-68-3] Yellow oil packaged in dark glass screw cap vials. **Purity:** > 95% **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 8-[(2E)-3-iodo-2-propen-1-yl]-3-(4-methylphenyl)-, 2-fluoroethyl ester, (1R,2S,3S,5S)- **Synonymes:** (2-fluoroethyl-8-[(2E)-3-iododprop-2-en-1-yl]-3-(4-tolyl)-tropane-2-carboxylate **Literature:** Varrone A. et al. In Vitro Autoradiography and In Vivo Evaluation in Cynomolgus Monkey of [^{18}F]FE-PE2I, a New Dopamine Transporter PET Radioligand. Synapse 2009; 871-880.	**Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
4180	**Nor-beta-CCIT** **Precursor for [^{18}F]FECNT** $C_{15}H_{18}ClNO_2$ **Molar Mass:** 279.76 [146725-33-9] Brownish solid packaged in dark glass crimp cap vials (4180.0001) or screw cap vials (4180.0010). **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 3-(4-chlorophenyl)-, methyl ester, (1R,2S,3S,5S)- **Synonymes:** 3-β-(4-chlorophenyl)nortropane-2-β-carboxylic acid methyl ester; Nor-β-CCIT **Literature:** Goodman M.M. et al. ^{18}F-labeled FECNT: a selective radioligand for PET imaging of brain dopamine transporter. Nucl. Med. Biol. 2000, 27, 1-12. Votaw J.R. et al. Measurement of dopamine transporter occupancy for multiple injections of cocaine using a single injection of [^{18}F]FECNT. Synapse 2002, 44, 203-210.	**4180.0001: 1 mg per vial** **4180.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
4190	**FECNT** **Reference standard for [^{18}F]FECNT** $C_{17}H_{21}ClFNO_2$ **Molar Mass:** 325.81 [281667-94-5] Brownish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 3-(4-chlorophenyl)-8-(2-fluoroethyl)-, methyl ester, (1R,2S,3S,5S)- **Synonymes:** N-Fluoroethyl-2β-carbomethoxy-3β-(4-chlorophenyl)-nortropane **Literature:** Goodman M.M. et al. ^{18}F-labeled FECNT: a selective radioligand for PET imaging of brain dopamine transporter. Nucl. Med. Biol. 2000, 27, 1-12. Votaw J.R. et al. Measurement of dopamine transporter occupancy for multiple injections of cocaine using a single injection of [^{18}F]FECNT. Synapse 2002, 44, 203-210.	**4190.0001: 1 mg per vial** **4190.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
4200	**Altropane acid** **Precursor for [^{11}C]Altropane** $C_{17}H_{19}FINO_2$ **Molar Mass:** 415.24 [335104-67-1] Colourless solid packaged in dark glass crimp cap vials (4200.0001) or screw cap vials (4200.0025). **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 3-(4-fluorophenyl)-8-[(2E)-3-iodo-2-propenyl]-, (1R,2S,3S,5S)- **Synonymes:** (E)-N-(3-Iodoprop-2-enyl)-2β-carboxy-3β-(4-fluorophenyl)-nortropane; (E)-N-(1-Iodoprop-1-en-3-yl)-3-beta-(4-fluorophenyl)-nortropane-2-beta-carboxylic acid **Literature:** Fischman A.J. et al. [^{11}C,^{127}I] Altropane: a highly selective ligand for PET imaging of dopamine transporter sites. Synapse 2001, 39, 332-342. Madras B.K. et al. Altropane, a SPECT or PET imaging probe for dopamine neurons: I. Dopamine transporter binding in primate brain. Synapse 1998, 29, 93-104. II. Distribution to dopamine-rich regions of primate brain. Synapse 1998, 29, 105-115 III. Human dopamine tranporter in postmortem normal and Parkinsons brain. Synapse 1998, 29, 116-127.	**4200.0001: 1 mg per vial** **4200.0025: 25 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
4201	**Altropane acid hydrochloride** **Precursor for [^{11}C]Altropane** $C_{17}H_{19}FINO_2 \cdot HCl$ **Molar Mass:** 451.70 [335104-67-1] (Altropane acid free amine) Colourless solid packaged in dark glass crimp cap vials (4201.0001) or screw cap vials (4201.0025). **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 3-(4-fluorophenyl)-8-[(2E)-3-iodo-2-propenyl]-, (1R,2S,3S,5S)-, hydrochloride salt **Synonymes:** (E)-N-(3-Iodoprop-2-enyl)-2β-carboxy-3β-(4-fluorophenyl)-nortropane; (E)-N-(1-Iodoprop-1-en-3-yl)-3-beta-(4-fluorophenyl)-nortropane-2-beta-carboxylic acid, hydrochloride salt **Literature:** Same as product number 4200	**4201.0001: 1 mg per vial** **4201.0025: 25 mg per vial** **Please inquire for customized filling and bulk quantities.** 

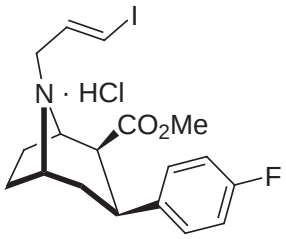
Product Number	Product	Order number / Unit
4210	**Altropane** **Reference standard for [^{11}C]Altropane** **Reference standard for [*I]Altropane** $C_{18}H_{21}FINO_2$ **Molar Mass:** 429.27 [180468-34-2] Colourless to orange solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 3-(4-fluorophenyl)-8-[(2E)-3-iodo-2-propenyl]-, methyl ester, (1R,2S,3S,5S)- **Synonymes:** (E)-N-(1-Iodoprop-1-en-3-yl)-3-β-(4-fluorophenyl)-nortropane-2-β-carboxylic acid methyl ester; (E)-N-(3-Iodoprop-2-enyl)-2β-carbomethoxy-3β-(4-fluorophenyl)-nortropane; 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 3-(4-fluorophenyl)-8-(3-iodo-2-propenyl)-, methyl ester, [1R-[1a,2a,3a,5a,8(E)]]-; IACFT  	**4210.0001: 1 mg per vial** **4210.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**

Literature:

Fischman A.J. et al. [^{11}C,^{127}I] Altropane: a highly selective ligand for PET imaging of dopamine transporter sites. Synapse 2001, 39, 332-342.

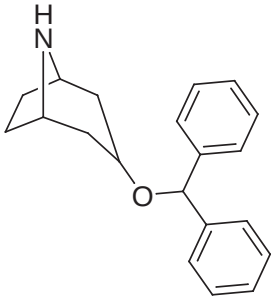
Elmaleh D.J. et al. Preparation and biological evaluation of iodine-125-IACFT: a selective SPECT agent for imaging dopamine transporter sites. J. Nucl. Med. 1996, 37, 1197-1202.

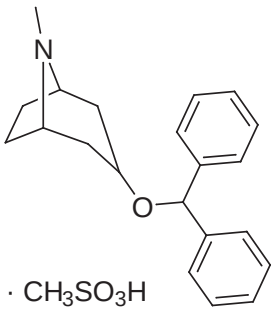
Madras B.K. et al. Altropane, a SPECT or PET imaging probe for dopamine neurons: I. Dopamine transporter binding in primate brain. Synapse 1998, 29, 93-104. II. Distribution to dopamine-rich regions of primate brain. Synapse 1998, 29, 105-115 III. Human dopamine tranporter in postmortem normal and Parkinsons brain. Synapse 1998, 29, 116-127.

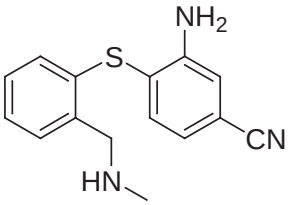
Product Number	Product	Order number / Unit
4211	**Altropane hydrochloride** **Reference standard for [^{11}C]Altropane** **Reference standard for [*I]Altropane** $C_{18}H_{21}FINO_2 \cdot HCl$ **Molar Mass:** 465.73 [180468-34-2] (free base) Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** 8-Azabicyclo[3.2.1]octane-2-carboxylic acid, 3-(4-fluorophenyl)-8-[(2E)-3-iodo-2-propenyl]-, methyl ester, (1R,2S,3S,5S)-, hydrochloride salt **Synonymes:** (E)-N-(1-Iodoprop-1-en-3-yl)-3-β-(4-fluorophenyl)-nortropane-2-β-carboxylic acid methyl ester, hydrochloride; (E)-N-(3-Iodoprop-2-enyl)-2β-carbomethoxy-3β-(4-fluorophenyl)-nortropane hydrochloride; IACFT HCl  	**4211.0001: 1 mg per vial** **4211.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**

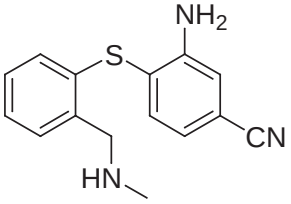
Literature:

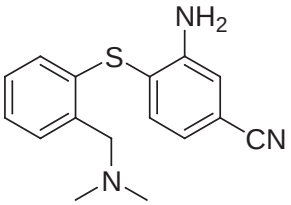
Same as product number 4210

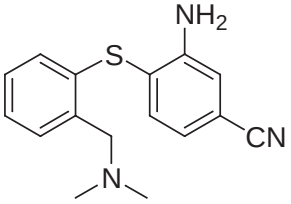
Product Number	Product	Order number / Unit
4230	**Norbenztropine** **Precursor for [^{11}C]Benztropine** $C_{20}H_{23}NO$ **Molar Mass:** 293.40 [28404-87-7] Colourless to yellowish oil packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 8-Azabicyclo[3.2.1]octane, 3-(diphenylmethoxy)-, (3-endo)- **Synonymes:** Norbenztropine; 3-(Benzhydryloxy)-8-azabicyclo[3.2.1]octane; 1αH,5αH-Nortropane, 3α-(diphenylmethoxy)-; 8-Azabicyclo[3.2.1]octane, 3-(diphenylmethoxy)-, endo-; endo-3-(Benzhydryloxy)-8-azabicyclo[3.2.1]octane **Literature:** Agoston G.E. et al. Novel N-Substituted 3α-[Bis(4´-fluorophenyl)methoxy]tropane Analogues: Selective Ligands for the Dopamine Transporter. J. Med. Chem. 1997, 40, 4329-4339	**4320.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

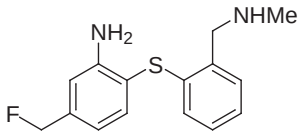
Product Number	Product	Order number / Unit
4231	**Benztropine Mesylate** **Reference standard for [^{11}C]Benztropine** $C_{21}H_{25}NO \cdot CH_4O_3S$ **Molar Mass:** 403.53 [132-17-2] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** 3-(Benzhydryloxy)-8-methyl-8-azabicyclo[3.2.1]octane methanesulfonate **Synonymes:** 8-Azabicyclo[3.2.1]octane, 3-(diphenylmethoxy)-, endo, methanesulfonate **Literature:** Agoston G.E. et al. Novel N-Substituted 3α-[Bis(4´-fluorophenyl)methoxy]tropane Analogues: Selective Ligands for the Dopamine Transporter. J. Med. Chem. 1997, 40, 4329-4339	**Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
4300	**MASB** **Precursor for [^{11}C]DASB ([^{11}C]N,N-Dimethyl-2-(2-amino-4-cyanophenylthio)benzylamine)** $C_{15}H_{15}N_3S$ **Molar Mass:** 269.37 [296774-10-2] Off-white to brownish solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Benzonitrile, 3-amino-4-[[2-[(methylamino)methyl]phenyl]thio **Synonymes:** N-Methyl-2-(2-amino-4-cyanophenylthio)-benzylamine; N-Desmethyl-DASB **Literature:** Houle S. et al. Imaging the serotonin transporter with positron emission tomography: initial human studies with [^{11}C]DAPP and [^{11}C]DASB. Eur. J. Nucl. Med. 2000, 29, 1719-1722. Wilson A.A. et al. Novel Radiotracers for imaging the serotonin transporter by positron emission tomography: synthesis, radiosynthesis, and in vitro and ex vivo evaluation of ^{11}C-labeled 2-(phenylthio)aralkylamines. J. Med. Chem. 2000, 43, 3103-3110.	**4300.0001: 1 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
4301	**MASB (GMP)** **Precursor for [^{11}C]DASB ([^{11}C]N,N-Dimethyl-2-(2-amino-4-cyanophenylthio)benzylamine)** Manufactured according to GMP requirements for APIs for use in clinical trials (ICH Q7 chapter 19) $C_{15}H_{15}N_3S$ **Molar Mass:** 269.37 [296774-10-2] Off-white to brownish solid packaged in dark glass vials. **Purity:** > 98 % **Certificates:** CoA with NMR and IR spectra, and melting point (identity); HPLC (purity); GC (residual solvents) **Chemical Name:** CA index name: Benzonitrile, 3-amino-4-[[2-[(methylamino)methyl]phenyl]thio **Synonymes:** N-Methyl-2-(2-amino-4-cyanophenylthio)-benzylamine; N-Desmethyl-DASB **Literature:** Same as product number 4300.	**4301.0050: 50 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
4310	**DASB** **Reference standard for [^{11}C]DASB ([^{11}C]N,N-Dimethyl-2-(2-amino-4-cyanophenylthio)benzylamine)** $C_{16}H_{17}N_3S$ **Molar Mass:** 283.39 [627490-01-1] Yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Benzonitrile, 3-amino-4-[[2-[(dimethylamino)methyl]phenyl]thio] **Synonymes:** N,N-Dimethyl-2-(2-amino-4-cyanophenylthio)-benzylamine; 3-Amino-4-(2-dimethylaminomethyl-phenylsulfanyl)-benzonitrile **Literature:** Houle S. et al. Imaging the serotonin transporter with positron emission tomography: initial human studies with [^{11}C]DAPP and [^{11}C]DASB. Eur. J. Nucl. Med. 2000, 29, 1719-1722. Wilson A.A. et al. Novel Radiotracers for imaging the serotonin transporter by positron emission tomography: synthesis, radiosynthesis, and in vitro and ex vivo evaluation of ^{11}C-labeled 2-(phenylthio)aralkylamines. J. Med. Chem. 2000, 43, 3103-3110.	**4310.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
4311	**DASB (GMP)** **Reference standard for [^{11}C]DASB ([^{11}C]N,N-Dimethyl-2-(2-amino-4-cyanophenylthio)benzylamine)** Manufactured according to GMP requirements for APIs for use in clinical trials (ICH Q7 chapter 19) $C_{16}H_{17}N_3S$ **Molar Mass:** 283.39 [627490-01-1] Yellowish solid packaged in dark glass vials. **Purity:** > 98 % **Certificates:** CoA with NMR and IR spectra, and melting point (identity); HPLC (purity); GC (residual solvents) **Chemical Name:** CA index name: Benzonitrile, 3-amino-4-[[2-[(dimethylamino)methyl]phenyl]thio] **Synonymes:** N,N-Dimethyl-2-(2-amino-4-cyanophenylthio)-benzylamine; 3-Amino-4-(2-dimethylaminomethyl-phenylsulfanyl)-benzonitrile **Literature:** Same as product number 4310.	**4311.0050: 50 mg per vial** **Please inquire for customized filling and bulk quantities.** 

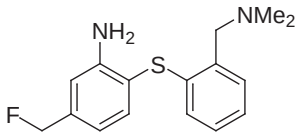
Product Number	Product	Order number / Unit
4320	**AFM precursor** **Precursor for [^{11}C]AFM ([^{11}C]2-(2-(Dimethylaminomethyl)phenylthio)-5-fluoromethylphenylamine)** $C_{15}H_{17}FN_2S \cdot x$ HCl **Molar Mass:** 276.37 (free base) [844699-84-9] (free base) Colourless solid packaged in dark glass screw cap vials. **Purity:** > 90 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** Benzenemethanamine, 2-[[2-amino-4-(fluoromethyl)phenyl]thio]-N-methyl-, hydrochloride salt **Synonymes:** n/a	**4320.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**  · x HCl

Literature:

Huang Y. et al. Comparative Evaluation in Nonhuman Primates of Five PET Radiotracers for Imaging the Serotonin Transporters: [^{11}C]McN 5652, [^{11}C]ADAM, [^{11}C]DASB, [^{11}C]DAPA, and [^{11}C]AFM. J. Cereb. Blood Flow Metab. 2002, 22, 1377-1398.

Huang Y. et al. Fluorinated Analogues of ADAM as New PET Radioligands for the Serotonin Transporter : Synthesis and Pharmacological Evaluation. J. Labelled Compd. Radiopharm. 2001, 44, Suppl. 1, S18-S20.

Oya S. et al. New PET Imaging Agent for the Serotonin Transporter: [^{18}F]ACF (2-[(2-Amino-4-chloro-5-fluorophenyl)thio]-N,N-dimethyl-benzenemethanamine). J. Med. Chem. 2002, 45, 4716-23.

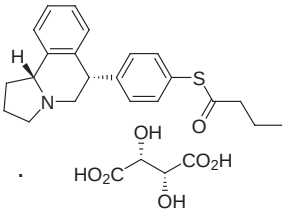
Product Number	Product	Order number / Unit
4330	**AFM standard** **Reference standard for [^{11}C]AFM and [^{18}F]AFM ([^{11}C]2-(2-(Dimethylaminomethyl)phenylthio)-5-fluoromethylphenylamine)** $C_{16}H_{19}FN_2S \cdot x$ HCl **Molar Mass:** 290.40 (free base) [627490-40-8] (free base) Colourless solid packaged in dark glass screw cap vials. **Purity:** > 90 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** Benzenemethanamine, 2-[[2-amino-4-(fluoromethyl)phenyl]thio]-N,N-dimethyl-, hydrochloride salt **Synonymes:** 2-(2-Dimethylaminomethyl-phenylsulfanyl)-5-fluoromethyl-phenylamine hydrochloride salt	**4330.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**  · x HCl

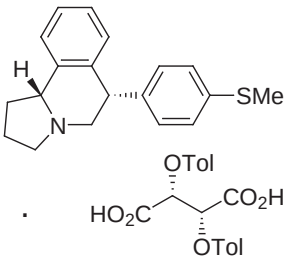
Literature:

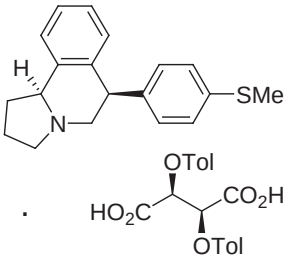
Huang Y. et al. Comparative Evaluation in Nonhuman Primates of Five PET Radiotracers for Imaging the Serotonin Transporters: [^{11}C]McN 5652, [^{11}C]ADAM, [^{11}C]DASB, [^{11}C]DAPA, and [^{11}C]AFM. J. Cereb. Blood Flow Metab. 2002, 22, 1377-1398.

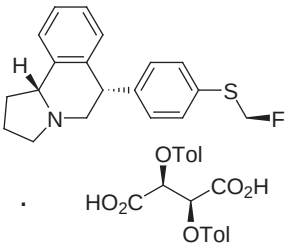
Huang Y. et al. Fluorinated Analogues of ADAM as New PET Radioligands for the Serotonin Transporter : Synthesis and Pharmacological Evaluation. J. Labelled Compd. Radiopharm. 2001, 44, Suppl. 1, S18-S20.

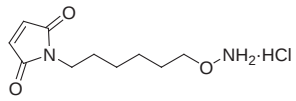
Oya S. et al. New PET Imaging Agent for the Serotonin Transporter: [^{18}F]ACF (2-[(2-Amino-4-chloro-5-fluorophenyl)thio]-N,N-dimethyl-benzenemethanamine). J. Med. Chem. 2002, 45, 4716-23.

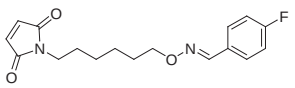
Product Number	Product	Order number / Unit
4360	**(+)-McN 5652 Thiobutyrate** **Precursor for (+)-[^{11}C]McN 5652** $C_{22}H_{25}NOS \cdot C_4H_6O_6$ **Molar Mass:** 501.59 [167548-65-4] (free base) Off-white solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** Butanethioic acid, S-[4-(1,2,3,5,6,10b-hexahydropyrrolo[2,1-a]isoquinolin-6-yl)phenyl] ester, trans-(+), (2R,3R)-2,3-dihydroxybutanedioate **Synonymes:** Thiobutyric acid S-[4-(1,2,3,5,6,10b-hexahydro-pyrrolo[2,1-a]isoquinolin-6-yl)-phenyl] ester; compound with 2,3-dihydroxy-succinic acid; S-Bu-McN-5652 tartrate **Literature:** Parsey R.V. et al. In Vivo Quantification of Brain Serotonin Transporters in Humans Using [^{11}C]McN 5652. J. Nucl. Med. 2000, 41, 1465-1477. Buck A. et al. Evaluation of Serotonergic Transporters Using PET and [^{11}C]McN 5652: Assessment of Methods. J. Cereb. Blood Flow Metab. 2000, 20, 253-262. Suehiro M. et al. An improved method for the synthesis of radiolabeled McN5652 via thioester precursors. Nucl. Med. Biol. 1995, 22, 543-545.	**4360.0001: 1 mg per vial** **4360.0005: 5 mg per vial** **Please inquire for customized filling and bulk quantities.** 

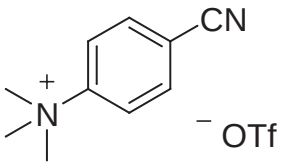
Product Number	Product	Order number / Unit
4370	**(+)-McN 5652** **Reference standard for (+)-[^{11}C]McN 5652** $C_{19}H_{21}NS \cdot C_{20}H_{18}O_8$ **Molar Mass:** 681.79 [259145-56-7] [103729-16-4] (free base) Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** Butanedioic acid, 2,3-bis[(4-methylbenzoyl)oxy]-, (2R,3R)-, compd. with (6S,10bR)-1,2,3,5,6,10b-hexahydro-6-[4-(methylthio)phenyl]pyrrolo[2,1- a]isoquinoline; Pyrrolo[2,1-a]isoquinoline, 1,2,3,5,6,10b-hexahydro-6-[4-(methylthio)phenyl]-, (6S,10bR)-, (2R,3R)-2,3-bis[(4-methylbenzoyl)oxy]butanedioate **Synonymes:** Pyrrolo[2,1-a]isoquinoline, 1,2,3,5,6,10b-hexahydro-6-[4-(methylthio)phenyl]-, (6S,10bR)-, (2R,3R)-2,3-di-(O-4-methylphenyloxy)butanedioate; (+)-McN 5652, (-)-di-O-toluyltartrate salt **Literature:** Zessin J. et al. Efficient Synthesis of Enantiomerically Pure Thioester Precursors of [^{11}C]MCN-5652 from Racemic MCN-5652. J. Labelled Compd. Radiopharm. 1999, 42, 1301-12. Parsey R.V. et al. In Vivo Quantification of Brain Serotonin Transporters in Humans Using [^{11}C]McN 565J. Nucl. Med. 2000, 41, 1465-1477. Buck A. et al. Evaluation of Serotonergic Transporters Using PET and [^{11}C]McN 5652: Assessment of Methods. J. Cereb. Blood Flow Metab. 2000, 20, 253-262. Suehiro M. et al. An improved method for the synthesis of radiolabeled McN5652 via thioester precursors. Nucl. Med. Biol. 1995, 22, 543-5.	**4370.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
4380	**(-)-McN 5652** **Reference standard for (-)-[^{11}C]McN 5652** $C_{19}H_{21}NS \cdot C_{20}H_{18}O_8$ **Molar Mass:** 681.79 [262352-33-0] [103729-13-1] (free base) Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index names: Butanedioic acid, 2,3-bis[(4-methylbenzoyl)oxy]-, (2S,3S)-, compd. with (6R,10bS)-1,2,3,5,6,10b-hexahydro-6-[4-(methylthio)phenyl]pyrrolo[2,1-a]isoquinoline (1:1); Pyrrolo[2,1-a]isoquinoline, 1,2,3,5,6,10b-hexahydro-6-[4-(methylthio)phenyl]-, (6R,10bS)-, (2S,3S)-2,3-bis[(4-methylbenzoyl)oxy]butanedioate (1:1) **Synonymes:** Pyrrolo[2,1-a]isoquinoline, 1,2,3,5,6,10b-hexahydro-6-[4-(methylthio)phenyl]-, (6R,10bS)-, (2S,3S)-2,3-di-(O-4-methylphenyloxy)butanedioate; (-)-McN 5652, (+)-di-O-toluyltartrate salt **Literature:** Zessin J. et al. Efficient Synthesis of Enantiomerically Pure Thioester Precursors of [^{11}C]MCN-5652 from Racemic MCN-5652. J. Labelled Compd. Radiopharm. 1999, 42, 1301-12. Parsey R.V. et al. In Vivo Quantification of Brain Serotonin Transporters in Humans Using [^{11}C]McN 565J. Nucl. Med. 2000, 41, 1465-1477. Buck A. et al. Evaluation of Serotonergic Transporters Using PET and [^{11}C]McN 5652: Assessment of Methods. J. Cereb. Blood Flow Metab. 2000, 20, 253-262. Suehiro M. et al. An improved method for the synthesis of radiolabeled McN5652 via thioester precursors. Nucl. Med. Biol. 1995, 22, 543-5.	**4380.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
4381	**(+)-Fluoromethyl-McN 5652** **Reference standard for S-([^{18}F]Fluoromethyl)-(+)-McN5652** $C_{19}H_{20}FNS \cdot C_{20}H_{18}O_8$ **Molar Mass:** 699.79 [432038-21-6] (free base) Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H, ^{13}C and ^{19}F NMR spectra; optical rotation **Chemical Name:** Pyrrolo[2,1-a]isoquinoline, 6-[4-[(fluoromethyl)thio]-phenyl]-1,2,3,5,6,10b-hexahydro-, (6S,10bR)-, (2S,3S)-2,3-di-(O-4-methylphenyloxy)butanedioate **Synonymes:** (+)-Fluoromethyl-McN 5652, (-)-di-O-toluyltartrate salt **Literature:** Zessin J. et al. Synthesis of S-([^{18}F]fluoromethyl)-(+)-McN5652 as a potential PET radioligand for the serotonin transporter. Nucl Med Biol. 2001, 28, 857-863. Solin O. et al. S-[^{18}F]fluoromethyl-(+)-McN5652, a PET tracer for the serotonin transporter: evaluation in rats. Synapse 2003, 47, 45-53. Brust P. et al. Positron emission tomography imaging of the serotonin transporter in the pig brain using [^{11}C](+)-McN5652 and S-([^{18}F]fluoromethyl)-(+)-McN5652. Synapse 2003, 47, 143-151.	**4381.0005: 5 mg per vial** **4381.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

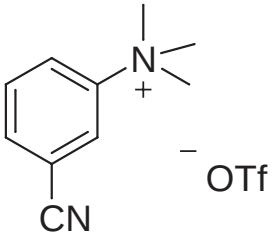
Product Number	Product	Order number / Unit
4383	**FBAM precursor** **Precursor for [^{18}F]FBAM (N-[6-(4-[^{18}F]fluorobenzylidene)aminooxyhexyl]maleimide)** $C_{10}H_{17}ClN_2O_3$ **Molar Mass:** 248.71 [937025-28-0] Colourless solid packaged in glass vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 1H-Pyrrole-2,5-dione, 1-[6-(aminooxy)hexyl]-, hydrochloride **Synonymes:** N-(6-aminohexyl)maleimide; 1-(6-Aminooxy-hexyl)-pyrrole-2,5-dione hydrochloride **Literature:** Wuest F. et al. Labeling of low-density lipoproteins using the ^{18}F-labeled thiol-reactive reagent N-[6-(4-[^{18}F]fluorobenzylidene)aminooxyhexyl]maleimide. Nucl. Med. Biol. 2007, 34, 5-15.	**4383.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

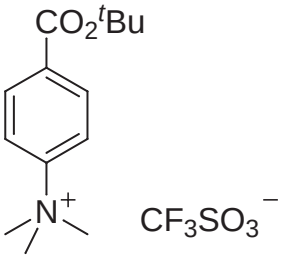
Product Number	Product	Order number / Unit
4384	**FBAM standard** **Reference standard for [^{18}F]FBAM (N-[6-(4-[^{18}F]fluorobenzylidene)aminooxyhexyl]maleimide)** $C_{17}H_{19}FN_2O_3$ **Molar Mass:** 318.34 [937025-29-1] Colourless solid packaged in glass vials. **Purity:** > 90 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: Benzaldehyde, 4-fluoro-, O-[6-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)hexyl]oxime, [C(E)]- **Synonymes:** N-[6-(4-fluorobenzylidene)aminooxyhexyl]maleimide; 4-Fluoro-benzaldehyde O-[6-(2,5-dioxo-2,5-dihydro-pyrrol-1-yl)-hexyl]-oxime **Literature:** Wuest F. et al. Labeling of low-density lipoproteins using the ^{18}F-labeled thiol-reactive reagent N-[6-(4-[^{18}F]fluorobenzylidene)aminooxyhexyl]maleimide. Nucl. Med. Biol. 2007, 34, 5-15.	**4384.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
4385	**CPTMA** **Precursor for [^{18}F]FBA, [^{18}F]FBBA and [^{18}F]FBAPM** $C_{10}H_{13}N_2 \cdot CF_3O_3S$ **Molar Mass:** 310.29 [124915-01-1] Yellowish to slightly greenish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: Benzenaminium, 4-cyano-N,N,N-trimethyl-, 1,1,1-trifluoromethanesulfonate (1:1) **Synonymes:** Benzenaminium, 4-cyano-N,N,N-trimethyl-, salt with trifluoromethanesulfonic acid (1:1); Methanesulfonic acid, trifluoro-ion(1-), 4-cyano-N,N,N-trimethylbenzenaminium; 4-Cyano-N,N,N-trimethylanilinium triflate	**4385.0010: 10 mg per vial** **4385.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

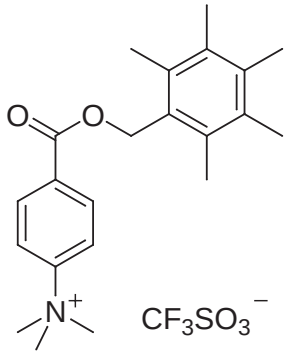
Literature:

Dollé F. et al. A general method for labeling oligodeoxynucleotides with ^{18}F for in vivo pet imaging. J. Labelled Compd. Radiopharm. 1997, 39, 319-330.

Product Number	Product	Order number / Unit
4386	**CMTMA** **Precursor for meta-[^{18}F]Fluorobenzylguanidine** $C_{11}H_{13}F_3N_2O_3S$ **Molar Mass:** 310.29 [51570-69-5] (CMTMA cation) Colourless solid packaged in glass vials. **Purity:** > 95% **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** 3-Cyano-N,N,N-trimethylanilinium triflate **Synonymes:** 3-Nitrilo phenyltrimethylammonium trifluoromethanesulfonate;(3-Cyano-phenyl)-trimethyl-ammonium, trifluoro-methanesulfonate; Benzenaminium, 3-cyano-N,N,N-trimethyl-, salt with trifluoromethanesulfonic acid (1:1); meta-[^{18}F]Fluorobenzylguanidine precursor **Literature:** Garg P.K. et al. Synthesis and Preliminary Evaluation of para- and meta-[^{18}F]Fluorobenzylguanidine. Nucl. Med. Biol. 1994, 21, 97-103.	**Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
4389	**TBAB** **Precursor for [^{18}F]FB (4-[^{18}F]Fluorobenzoic acid)** $C_{15}H_{22}F_3NO_5S$ **Molar Mass:** 385.40 [660845-84-1] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Benzenaminium, 4-[(1,1-dimethylethoxy)carbonyl]-N,N,N-trimethyl-, 1,1,1-trifluoromethanesulfonate (1:1) **Synonymes:** 4-tert-Butoxycarbonylmethyl-phenyl)-trimethyl-ammonium; trifluoro-methanesulfonate; tert.-Butyl 4-N,N,N-trimethylammoniumbenzoate triflate; Benzenaminium, 4-[(1,1-dimethylethoxy)carbonyl]-N,N,N-trimethyl-, salt with trifluoromethanesulfonic acid (1:1) **Literature:** Wüst F. et al. Radiolabelling of isopeptide N$^{\varepsilon}$(γ-glutamyl)-L-lysine by conjugation with N-succinimidyl-4-[^{18}F]fluorobenzoate. Appl. Radiat. Isot. 2003, 59, 43-48. Maeding P. et al. Module-assisted synthesis of the bifunctional labelling agent N-succinimidyl 4-[^{18}F]fluorobenzoate ([^{18}F]SFB). Appl. Radiat. Isot. 2005, 63, 329-332.	**4389.0010: 10 mg per vial** **4389.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

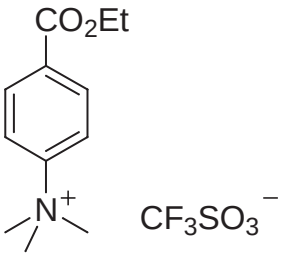
Product Number	Product	Order number / Unit
4390	**PMBAB** **Precursor for [^{18}F]FB (4-[^{18}F]Fluorobenzoic acid)** $C_{22}H_{30}NO_2 \cdot CF_3O_3S$ **Molar Mass:** 489.55 [223699-69-2] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: Benzenaminium, N,N,N-trimethyl-4-[[(pentamethylphenyl)methoxy]carbonyl]-, salt with trifluoromethanesulfonic acid (1:1) **Synonymes:** Pentamethylbenzyl-(4-trimethylammonium)benzoat, trifluoroacetate salt	**4390.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.**

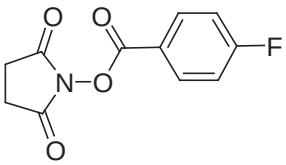


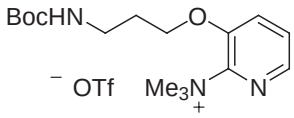
Literature:

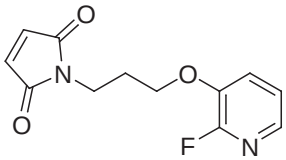
Kiesewetter D.O. et al. Fluoro-, bromo-, and iodopaclitaxel derivatives: synthesis and biological evaluation. Nucl. Med. Biol. 2003, 30, 11-24.

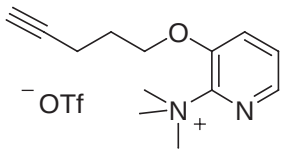
Lang L. et al. Development of Fluorine-18-Labeled 5-HT1A-Antagonists, J. Med. Chem. 1999, 42, 1576-1586.

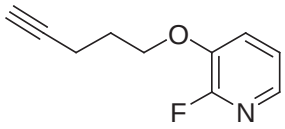
Product Number	Product	Order number / Unit
4391	**FB precursor** **Precursor for [^{18}F]FB (4-[^{18}F]Fluorobenzoic acid)** $C_{12}H_{18}NO_2 \cdot CF_3O_3S$ **Molar Mass:** 357.35 [124915-06-6] Colourless solid packaged in dark glass crimp cap vials (4391.0010) or screw cap vials (4391.0100). **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: Benzenaminium, 4-(ethoxycarbonyl)-N,N,N-trimethyl-, salt with trifluoromethanesulfonic acid (1:1) **Synonymes:** 4-(Ethoxycarbonyl)-N,N,N-trimethylbenzenaminium triflate; 4-(Ethoxycarbonyl)-N,N,N-trimethylbenzenaminium salt with trifluoromethanesulfonic acid; Methanesulfonic acid, trifluoro-, ion(1-), 4-(ethoxycarbonyl)-N,N,N-Trimethylbenzenaminium **Literature:** Kilbourn M.R. et al. Aryltrimethylammonium Trifluormethane-sulfonates as Precursors to Aryl [^{18}F]Fluorides: Improved Synthesis of [^{18}F]GBR-13119. J. Labelled Compd. Radiopharm. 1989, 27, 823-833.	**4391.0010: 10 mg per vial** **4391.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

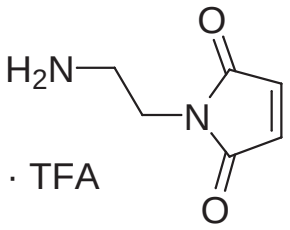
Product Number	Product	Order number / Unit
4392	**SFB** **Reference standard for [^{18}F]SFB (N-Succinimidyl 4-[^{18}F]Fluorobenzoate)** $C_{11}H_8FNO_4$ **Molar Mass:** 237.18 [66134-67-6] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 2,5-Pyrrolidinedione, 1-[(4-fluorobenzoyl)oxy]- **Synonymes:** N-Succinimidyl 4-Fluorobenzoate; Succinimido p-fluorobenzoate **Literature:** Zalutsky M.R. et al. Labeling Proteins with Fluorine-18 Using N-Succinimidyl 4-[^{18}F]Fluorobenzoate. Nucl. Med. Biol. 1992, 19, 275-281. Wester H.-J. et al. A comparative study of N.C.A. Fluorine-18 labeling of proteins via acylation and photochemical conjugation. Nucl. Med. Biol. 1996, 23, 365-372.	**4392.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

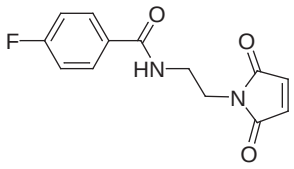
Product Number	Product	Order number / Unit
4393	**[^{18}F]FPyBrA/[^{18}F]FPyME precursor** **(2-Bromo-N-[3-(2-[^{18}F]fluoropyridin-3-yloxy)propylacetamide)** **resp.** **(1-[3-(2-[^{18}F]Fluoropyridin-3-yloxy)propyl]pyrrole-2,5-dione)** $C_{16}H_{28}N_3O_3 \cdot CF_3O_3S$ **Molar Mass:** 459.48 [640749-64-0] Colourless to white solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 2-Pyridinaminium, 3-[3-[[(1,1-dimethylethoxy)carbonyl]amino]propoxy]-N,N,N-trimethyl-, 1,1,1-trifluoromethanesulfonate (1:1) **Synonymes:** n/a **Literature:** Ducongé F. et al. Fluorine-18-Labeled Phospholipid Quantum Dot Micelles for in Vivo Multimodal Imaging from Whole Body to Cellular Scales. Bioconjugate Chem. 2008, 19, 1921-1926. De Bruin B. et al. 1-[3-(2-[^{18}F]Fluoropyridin-3-yloxy)propyl]pyrrole-2,5-dione: Design, Synthesis, and Radiosynthesis of a New [^{18}F]Fluoropyridine-Based Maleimide Reagent for the Labeling of Peptides and Proteins. Bioconjugate Chem. 2005, 16, 406-420. Kuhnast B. et al. Design and Synthesis of a New [^{18}F]Fluoropyridine-Based Haloacetamide Reagent for the Labeling of Oligonucleotides: 2-Bromo-N-[3-(2-[^{18}F]fluoropyridin-3-loxy)propyl]acetamide. Bioconjugate Chem. 2004, 15, 617-627.	**4393.0010: 10 mg per vial** **4393.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

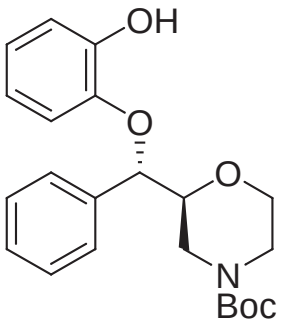
Product Number	Product	Order number / Unit
4394	**FPyME standard** **Reference standard for [^{18}F]FPyME** **(1-[3-(2-[^{18}F]Fluoropyridin-3-yloxy)propyl]pyrrole-2,5-dione)** $C_{12}H_{11}FN_2O_3$ **Molar Mass:** 250.23 [640749-61-7] Colourless solid packaged in glass vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 1H-Pyrrole-2,5-dione, 1-[3-[(2-fluoro-3-pyridinyl)oxy]propyl]- **Synonymes:** 1-[3-(2-Fluoropyridin-3-yloxy)propyl]pyrrole-2,5-dione **Literature:** de Bruin B. et al. 1-[3-(2-[^{18}F]Fluoropyridin-3-yloxy)propyl]pyrrole-2,5-dione: Design, Synthesis, and Radiosynthesis of a New [^{18}F]Fluoropyridine-Based Maleimide Reagent for the Labeling of Peptides and Proteins. Bioconjugate Chem. 2005, 16, 406.	**4394.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
4396	**[^{18}F]FPyKYNE precursor** **2-[^{18}F]Fluoro-3-pent-4-yn-1-yloxypyridine** $C_{13}H_{19}N_2O \cdot CF_3O_3S$ **Molar Mass:** 368.37 [1161009-68-2] Colourless to off-white solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 2-Pyridinaminium, N,N,N-trimethyl-3-(4-pentyn-1-yloxy)-, 1,1,1-trifluoromethanesulfonate (1:1) **Synonymes:** n/a **Literature:** Kuhnast B. et al. [^{18}F]FPyKYNE, a fluoropyridine-based alkyne reagent designed for the fluorine-18 labelling of macromolecules using click chemistry. J. Labelled Compd. Radiopharm. 2008, 51, 336-342.	**4396.0010: 10 mg per vial** **4396.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

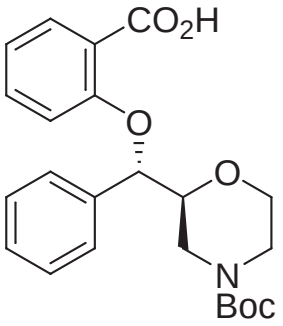
Product Number	Product	Order number / Unit
4397	**FPyKYNE** **Reference standard for [^{18}F]FPyKYNE** **2-[^{18}F]Fluoro-3-pent-4-yn-1-yloxypyridine** $C_{10}H_{10}FNO$ **Molar Mass:** 179.19 [1161009-63-7] Yellow liquid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Pyridine, 2-fluoro-3-(4-pentyn-1-yloxy)- **Synonymes:** 2-Fluoro-3-pent-4-ynyloxy-pyridine **Literature:** Dollé F. et al. [^{18}F]FPyKYNE, a fluoropyridine-based alkyne reagent designed for the fluorine-18 labelling of macromolecules using click chemistry. J. Labelled Compd. Radiopharm. 2008, 51, 336-342.	**4397.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
4398	**FBEM precursor** **Precursor for [^{18}F]FBEM (N-[2-(4-[^{18}F]-fluorobenzamido)ethyl]-maleimide)** $C_8H_9F_3N_2O_4$ **Molar Mass:** 254.16 [146474-00-2] Colourless solid packaged in glass vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 1H-Pyrrole-2,5-dione, 1-(2-aminoethyl)-, 2,2,2-trifluoroacetate (1:1) **Synonymes:** N-(2-Aminoethyl)maleimide trifluoroacetate salt; 2-Maleimidoethylamine trifluoroacetate salt; 2-Maleimidoethylamine trifluoroacetate; N-(2-Aminoethyl)maleimide trifluoroacetate; 1H-Pyrrole-2,5-dione, 1-(2-aminoethyl)-, mono(trifluoroacetate); 2-(2,5-Dioxo-2,5-dihydro-pyrrol-1-yl)-ethylamine trifluoroacetate **Literature:** Cai W. et al. A Thiol-Reactive ^{18}F-Labeling Agent, N-[2-(4-^{18}F-Fluorobenzamido)Ethyl]Maleimide, and Synthesis of RGD Peptide-Based Tracer for PET Imaging of $\alpha\nu\beta3$ Integrin Expression. J Nucl. Med. 2006, 47, 1172-1180. Kiesewetter D.O. et al. Radiolabeling of HER2-specific Affibody molecule with F-18. J. Fluorine Chem. 2008, 129, 799-806.	**4398.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

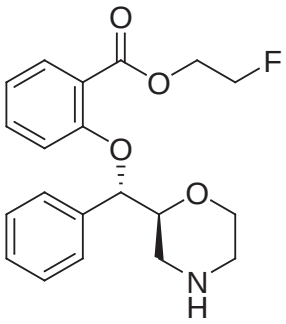
Product Number	Product	Order number / Unit
4399	**FBEM standard** **Reference standard for [^{18}F]FBEM (N-[2-(4-[^{18}F]-fluorobenzamido)ethyl]-maleimide)** $C_{13}H_{11}FN_2O_3$ **Molar Mass:** 262.24 [1089194-09-1] Colourless solid packaged in glass vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: Benzamide, N-[2-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)ethyl]-4-fluoro- **Synonymes:** N-[2-(4-[^{18}F]-fluorobenzamido)ethyl]-maleimide; N-[2-(2,5-Dioxo-2,5-dihydro-pyrrol-1-yl)-ethyl]-4-fluoro-benzamide **Literature:** Cai W. et al. A Thiol-Reactive ^{18}F-Labeling Agent, N-[2-(4-^{18}F-Fluorobenzamido)Ethyl]Maleimide, and Synthesis of RGD Peptide-Based Tracer for PET Imaging of $\alpha\nu\beta3$ Integrin Expression. J Nucl. Med. 2006, 47, 1172-1180. Kiesewetter D.O. et al. Radiolabeling of HER2-specific Affibody molecule with F-18. J. Fluorine Chem. 2008, 129, 799-806.	**4399.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

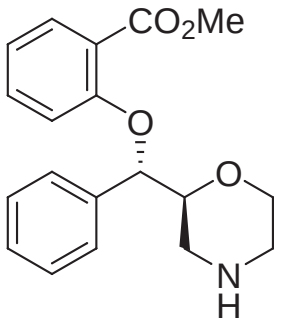
Product Number	Product	Order number / Unit
4400	**(2S,3S)-N-Boc-norethylreboxetine** **Precursor for [^{11}C]MeNER ([^{11}C]Methyl norethyl reboxetine)** $C_{22}H_{27}NO_5$ **Molar Mass:** 385.45 [754988-84-6] Colourless to yellowish solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 4-Morpholinecarboxylic acid, 2-[(S)-(2-hydroxyphenoxy)-phenylmethyl]-, 1,1-dimethylethyl ester, (2S)- **Synonymes:** Desethylreboxetine	**4400.0010: 10 mg per vial** **4400.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

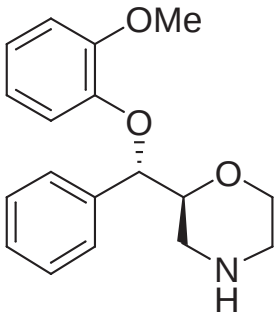
Literature:
Lin K.-S. et al. Synthesis, enantiomeric resolution, F-18 labeling and biodistribution of reboxetine analogs: promising radioligands for imaging the norepinephrine transporter with positron emission tomography. Nucl. Med. Biol. 2005, 32, 415-422.

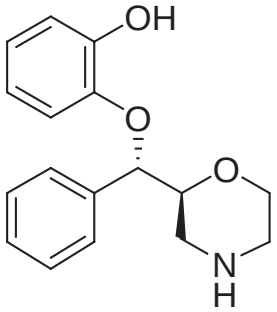
Product Number	Product	Order number / Unit
4402	**(2S,3S)-N-Boc-carboxylreboxetine** **Precursor for [^{11}C]Methylreboxetinecarboxylate** **Precursor for [^{18}F]Fluoroethylreboxetinecarboxylate** $C_{23}H_{27}NO_6$ **Molar Mass:** 413.46 [1016545-04-2] Yellowish solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 4-Morpholinecarboxylic acid, 2-[(S)-(2-carboxyphenoxy)-phenylmethyl]-,4-(1,1-dimethylethyl) ester, (2S)- **Synonymes:** Reboxetine acid	**4402.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

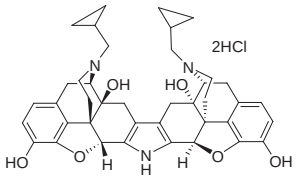
Literature:
Zheng F. et al. Synthesis, in vitro characterization, and radiolabeling of reboxetine analogs as potential PET radioligands for imaging the norepinephrine transporter. Bioorg. Med. Chem. 2008, 16, 783-793.

Product Number	Product	Order number / Unit
4403	**(2S,3S)-Carboxylreboxetine fluoroethyl ester trifluoroacetate** **Reference standard for [^{18}F]Fluoroethylreboxetinecarboxylate** $C_{20}H_{22}FNO_4 \cdot C_2HF_3O_2$ **Molar Mass:** 473.41 CAS-RN not yet assigned Light brown oil packaged in dark glass crimp cap vials. **Purity:** > 90 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** Benzoic acid, 2-[(S)-(2S)-2-morpholinylphenylmethoxy]-, 2-fluoroethyl ester, trifluoroacetate salt **Synonymes:** Reboxetine acid fluoroethyl ester, trifluoroacetate salt **Literature:** no literature reference available	**4403.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**  $\cdot CF_3CO_2H$

Product Number	Product	Order number / Unit
4405	**Methylreboxetinecarboxylate** **Reference standard for [^{11}C]Methylreboxetinecarboxylate** $C_{19}H_{21}NO_4 \cdot CF_3CO_2H$ **Molar Mass:** 441.39 [1016545-13-3] (free base) Pinkish oil packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** Benzoic acid, 2-[(S)-(2S)-2-morpholinylphenylmethoxy]-, methyl ester, trifluoroacetate salt **Synonymes:** (2S,3S)-2-[α-(2-(Carbomethoxy)phenoxy)benzyl]morpholine, trifluoroacetate salt **Literature:** Zheng F. et al. Synthesis, in vitro characterization, and radiolabeling of reboxetine analogs as potential PET radioligands for imaging the norepinephrine transporter. Bioorg. Med. Chem. 2008, 16, 783-793.	**4405.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**  $\cdot CF_3CO_2H$

Product Number	Product	Order number / Unit
4406	**(2S,3S)-Methylreboxetine** **Reference standard for [^{11}C]MeNER ([^{11}C]Methyl norethyl reboxetine)** $C_{18}H_{21}NO_3$ **Molar Mass:** 299.36 [105018-14-2] Colourless to white solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index names: Morpholine, 2-[(S)-(2-methoxyphenoxy)phenylmethyl]-, (2S)-; Morpholine, 2-[(2-methoxyphenoxy)phenylmethyl]-, [S-(R*,R*)]- **Synonymes:** (S,S)-2-(α-(2-Methoxyphenoxy)benzyl)morpholine; Methyl norethyl reboxetine; MeNER **Literature:** Schou M. et al. Specific in vivo binding to the norepinephrine transporter demonstrated with the PET radioligand, (S,S)-[^{11}C]MeNER. Nucl. Med. Biol. 2003, 30, 707-714.	**4406.0010: 10 mg per vial** **4406.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
4407	**(2S,3S)-Desethylreboxetine** **Precursor for [^{11}C]MeNER ([^{11}C]Methyl norethyl reboxetine)** $C_{17}H_{19}NO_3$ **Molar Mass:** 285.34 [252570-31-3] Colourless to yellowish solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum; optical rotation **Chemical Name:** CA index name: Phenol, 2-[(S)-(2S)-2-morpholinylphenylmethoxy]- **Synonymes:** (+)-(2S,3S)-2-[2-Morpholinylphenylmethoxy]phenol; (2S,3S)-NH-norethylreboxetine **Literature:** Ding Y.-S. et al. Synthesis, enantiomeric resolution, F-18 labeling and biodistribution of reboxetine analogs: promising radioligands for imaging the norepinephrine transporter with positron emission tomography. Nucl. Med. Biol. 2005, 32, 415-422. Halldin C. et al. Specific in vivo binding to the norepinephrine transporter demonstrated with the PET radioligand, (S,S)-[^{11}C]MeNER. Nucl. Med. Biol. 2003, 30, 707-714.	**4407.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

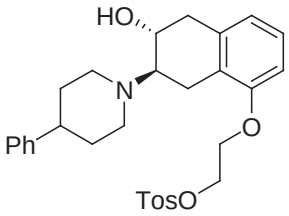
Product Number	Product	Order number / Unit
4500	**Norbinaltorphimine dihydrochloride** **Highly selective kappa opioid receptor antagonist** $C_{40}H_{43}N_3O_6 \cdot 2\ HCl$ **Molar Mass:** 734.71 [113158-34-2] [105618-26-6] (free base) Tan solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^1H NMR spectrum **Chemical Name:** CA index name: 4,8:11,15-Dimethano-20H-bisbenzofuro[2,3-a:3´,2´-i]dipyrido[4,3-b:3´,4´-h]carbazole-1,8a,10a,18-tetrol, 7,12-bis(cyclopropylmethyl)-5,6,7,8,9,10,11,12,13,14,19a,20b-dodecahydro-, hydrochloride (1:2), (4bS,8R,8aS,10aS,11R,14aS,19aR,20bR)- **Synonymes:** NorBNI; N-Desmethylbinaltorphimine; N-Demethylbinaltorphimine dihydrochloride	**4500.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

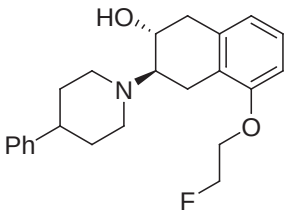
Literature:

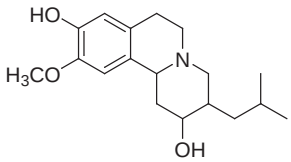
Portoghese P.S. et al. Binaltorphimine and nor-binaltorphimine, potent and selective kappa-opioid receptor antagonists. Life Sci. 1987, 40, 1287-1292.

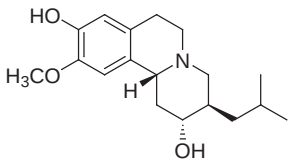
Takemori A.E. et al. Nor-binaltorphimine, a highly selective kappa-opioid antagonist in analgesic and receptor binding assays. J. Pharmacol. Exp. Ther. 1988, 246, 255-258.

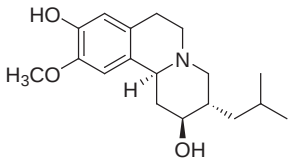
Lambert P.D. et al. The effect of central blockade of kappa-opioid receptors on neuropeptide Y-induced feeding in the rat. Brain Res. 1993, 629, 146-148.

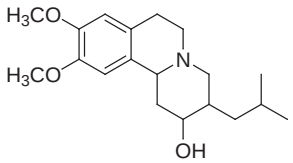
Product Number	Product	Order number / Unit
4600	**(-)-TEBV** **Precursor for [^{18}F]FEBV** $C_{30}H_{35}NO_5S$ **Molar Mass:** 521.67 [153215-71-5] Colourless crystals packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: 2-Naphthalenol, 1,2,3,4-tetrahydro-5-[2-[[(4-methyl-phenyl)sulfonyl]oxy]ethoxy]-3-(4-phenyl-1-piperidinyl)-, (2R-trans)- **Synonymes:** (-)-5-(2-Tosyloxyethoxy)-benzovesamicol; (-)-(2R,3R)-trans-2-hydroxy-3-(4-phenylpiperidino)-5-(2-tosyloxyethoxy)-tetralin **Literature:** Mulholland G.K. et al. Synthesis of [^{18}F]Fluoroethoxy-benzovesamicol, a radiotracer for cholinergic neurons. J. Labelled Compd. Radiopharm. 1993, 33, 583-591. Mulholland G.K. et al. [^{18}F]Fluoroethoxy-Benzovesamicol, a PET Radiotracer for the Vesicular Acetylcholine Transporter and Cholinergic Synapses. Synapse 1998, 30, 263-274.	**4600.0001: 1 mg per vial** **Please inquire for customized filling and bulk quantities.** 

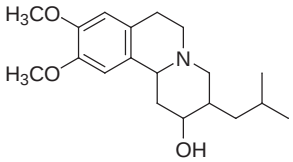
Product Number	Product	Order number / Unit
4610	**(-)-FEBV** **Reference standard for [^{18}F]FEBV** $C_{23}H_{28}FNO_2$ **Molar Mass:** 369.47 [153215-70-4] Colourless crystals packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 2-Naphthalenol, 5-(2-fluoroethoxy)-1,2,3,4-tetrahydro-3-(4-phenyl-1-piperidinyl)-, (2R-trans)- **Synonymes:** (-)-5-(2-Fluoroethoxy)-benzovesamicol; (-)-(2R,3R)-trans-2-hydroxy-3-(4-phenylpiperidino)-5-(2-fluoroethoxy)-tetralin **Literature:** Mulholland G.K. et al. Synthesis of [^{18}F]Fluoroethoxy-benzovesamicol, a radiotracer for cholinergic neurons. J. Labelled Compd. Radiopharm. 1993, 33, 583-591. Mulholland G.K. et al. [^{18}F]Fluoroethoxy-Benzovesamicol, a PET Radiotracer for the Vesicular Acetylcholine Transporter and Cholinergic Synapses. Synapse 1998, 30, 263-274.	**4610.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

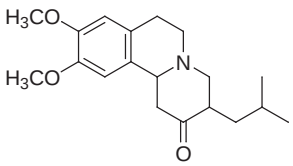
Product Number	Product	Order number / Unit
4700	**(±)-9-O-Desmethyl-α-dihydrotetrabenazine** **Precursor for [^{11}C]DTBZ** $C_{18}H_{27}NO_3$ **Molar Mass:** 305.41 [5220-98-4] Yellowish solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 2H-Benzo[a]quinolizine-2,9-diol, 1,3,4,6,7,11b-hexahydro-10-methoxy-3-(2-methylpropyl)- **Synonymes:** 2H-Benzo[a]quinolizine-2,9-diol, 1,3,4,6,7,11b-hexahydro-3-isobutyl-10-methoxy-; 2H-Benzo[a]quinolizine-2,9-diol, 1,3,4,6,7,11b-hexahydro-3-isobutyl-10-methoxy-; rac-9-O-Desmethyl-DTBZ **Literature:** DaSilva J.N. et al. Characterization of [^{11}C]Tetrabenazine as an In Vivo Radioligand for the Vesicular Monoamine Transporter. Nucl. Med. Biol. 1994, 21, 151-156. Jewett D. M. et al. A Simple Synthesis of [^{11}C]Dihydrotetrabenazine (DTBZ). Nucl. Med. Biol. 1997, 24, 197-199.	**4700.0001: 1 mg per vial** **Please inquire for customized filling and bulk quantities.** 

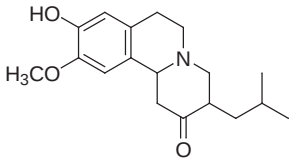
Product Number	Product	Order number / Unit
4710	**(+)-9-O-Desmethyl-α-dihydrotetrabenazine** **Precursor for (+)-[^{11}C]DTBZ** $C_{18}H_{27}NO_3$ **Molar Mass:** 305.41 CAS-RN not yet assigned Yellowish solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum; HPLC **Chemical Name:** 2H-Benzo[a]quinolizine-2,9-diol, 1,3,4,6,7,11b-hexahydro-10-methoxy-3-(2-methylpropyl)-, (2R,3R,11bR) **Synonymes:** (+)-9-O-Desmethyl-DTBZ **Literature:** DaSilva J.N. et al. Characterization of [^{11}C]Tetrabenazine as an In Vivo Radioligand for the Vesicular Monoamine Transporter. Nucl. Med. Biol. 1994, 21, 151-156. Jewett D. M. et al. A Simple Synthesis of [^{11}C]Dihydrotetrabenazine (DTBZ). Nucl. Med. Biol. 1997, 24, 197-199. Kilbourn M. et al. Absolute Configuration of (+)-α-Dihydro-tetrabenazine, an Active Metabolite of Tetrabenazine. Chirality 1997, 9, 59-62.	**4710.0001: 1 mg per vial** **Please inquire for customized filling and bulk quantities.** 

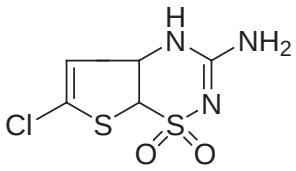
Product Number	Product	Order number / Unit
4720	**(-)-9-O-Desmethyl-α-dihydrotetrabenazine** **Precursor for (-)-[^{11}C]DTBZ** $C_{18}H_{27}NO_3$ **Molar Mass:** 305.41 CAS-RN not yet assigned Yellowish solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum; HPLC **Chemical Name:** 2H-Benzo[a]quinolizine-2,9-diol, 1,3,4,6,7,11b-hexahydro-10-methoxy-3-(2-methylpropyl)-, (2S,3S,11bS) **Synonymes:** (-)-9-O-Desmethyl-DTBZ **Literature:** DaSilva J.N. et al. Characterization of [^{11}C]Tetrabenazine as an In Vivo Radioligand for the Vesicular Monoamine Transporter. Nucl. Med. Biol. 1994, 21, 151-156. Jewett D. M. et al. A Simple Synthesis of [^{11}C]Dihydrotetrabenazine (DTBZ). Nucl. Med. Biol. 1997, 24, 197-199. Kilbourn M. et al. Absolute Configuration of (+)-α-Dihydro-tetrabenazine, an Active Metabolite of Tetrabenazine. Chirality 1997, 9, 59-62.	**4720.0001: 1 mg per vial** **Please inquire for customized filling and bulk quantities.** 

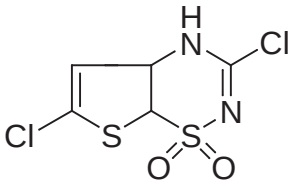
Product Number	Product	Order number / Unit
4730	**($\pm$)-α-Dihydrotetrabenazine** **Reference standard for [^{11}C]Dihydrotetrabenazine** $C_{19}H_{29}NO_3$ **Molar Mass:** 319.44 [3466-75-9] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 2H-Benzo[a]quinolizin-2-ol, 1,3,4,6,7,11b-hexahydro-3-isobutyl-9,10-dimethoxy- **Synonymes:** DTBZ; Dihydrotetrabenazine **Literature:** DaSilva J.N. et al. Characterization of [^{11}C]Tetrabenazine as an In Vivo Radioligand for the Vesicular Monoamine Transporter. Nucl. Med. Biol. 1994, 21, 151-156. Jewett D. M. et al. A Simple Synthesis of [^{11}C]Dihydrotetrabenazine (DTBZ). Nucl. Med. Biol. 1997, 24, 197-199.	**4730.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

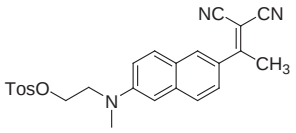
Product Number	Product	Order number / Unit
4731	**(±)-beta-Dihydrotetrabenazine** $C_{19}H_{29}NO_3$ **Molar Mass:** 319.44 CAS-RN not yet assigned Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** 2H-Benzo[a]quinolizin-2-ol, 1,3,4,6,7,11b-hexahydro-9,10-dimethoxy-3-(2-methylpropyl)-; (racemic 1:1 mixture of 2S,3R,11bR and 2R,3S,11bS isomers) **Synonymes:** 3-isobutyl-9,10-dimethoxy-1,3,4,6,7,11b-hexahydro-pyrido[2,1a]isoquinolin-2-ol; (±)-beta-DTBZ **Literature:** Lihsueh C.L. et al. In Vitro and in Vivo Studies of Benzisoquinoline Ligands for the Brain Synaptic Vesicle Monoamine Transporter J. Med. Chem. 1996, 39, 191-196.	**4731.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

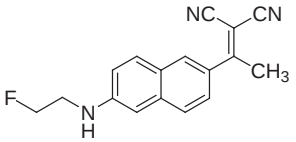
Product Number	Product	Order number / Unit
4732	**(±)-Tetrabenazine** **Reference standard for [^{11}C]Tetrabenazine** $C_{19}H_{27}NO_3$ **Molar Mass:** 317.43 [58-46-8] Colourless or nearly colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 2H-benzo[a]quinolizin-2-one, 1,3,4,6,7,11b-hexahydro-9,10-dimethoxy-3-(2-methylpropyl)-; (racemic compound; 3,11b trans-tetrabenazine; 1:1 mixture of 3R,11bR and 3S,11bS isomers) **Synonymes:** 3-isobutyl-9,10-dimethoxy-1,3,4,6,7,11b-hexahydro-pyrido[2,1-a]isoquinolin-2-one; (±)-TBZ; Ro 1-9569; Nitoman; Xenazine **Literature:** DaSilva J.N. et al. Characterization of [^{11}C]Tetrabenazine as an In Vivo Radioligand for the Vesicular Monoamine Transporter. Nucl. Med. Biol. 1994, 21, 151-156.	**4732.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
4733	**(±)-9-O-Desmethyl-tetrabenazine** **Precursor for [^{11}C]Tetrabenazine** $C_{18}H_{25}NO_3$ **Molar Mass:** 303.40 [149183-89-1] Colourless or nearly colourless solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 2H-benzo[a]quinolizin-2-one, 1,3,4,6,7,11b-hexahydro-9-hydroxy-10-methoxy-3-(2-methylpropyl)-; (racemic compound; 9-O-desmethyl (3,11b)-trans-tetrabenazine; 1:1 mixture of 3R,11bR and 3S,11bS isomers) **Synonymes:** 3-isobutyl-9-hydroxy-10-methoxy-1,3,4,6,7,11b-hexahydro-pyrido[2,1-a]isoquinolin-2-one; (±)-9-O-desmethyl-tetrabenazine; (±)-9-O-desmethyl-TBZ; **Literature:** DaSilva J.N. et al. Characterization of [^{11}C]Tetrabenazine as an In Vivo Radioligand for the Vesicular Monoamine Transporter. Nucl. Med. Biol. 1994, 21, 151-156.	**4733.0001: 1 mg per vial** **Please inquire for customized filling and bulk quantities.** 

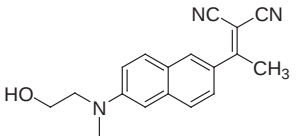
Product Number	Product	Order number / Unit
4900	**Aminothiadiazine** **Precursor for [^{18}F]Thiadiazine** **Reference standard for [^{11}C]Thiadiazine** $C_7H_{12}ClN_3O_2S_2$ **Molar Mass:** 269.77 [319002-53-4] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: 2H-Thieno[3,2-e]-1,2,4-thiadiazin-3-amine, 6-chloro-, 1,1-dioxide **Synonymes:** 3-Amino-6-chloro-4H-thieno[3,2-e]-1,2,4-thiadiazine 1,1-dioxide; 3-Amino-thiadiazine **Literature:** Nielsen F.E. et al. 6-Chloro-3-alkylamino-4H-thieno[3,2-e]-1,2,4-thiadiazine 1,1-Dioxide Derivatives Potently and Selectively Activate ATP Sensitive Potassium Channels of Pancreatic beta-Cells. J. Med. Chem. 2002, 45, 4171-4187.	**4900.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
4910	**Chlorothiadiazine** **Precursor for [^{18}F]Thiadiazine** $C_7H_{10}Cl_2N_2O_2S_2$ **Molar Mass:** 289.2 [194086-61-8] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: 2H-Thieno[3,2-e]-1,2,4-thiadiazine, 3,6-dichloro-, 1,1-dioxide **Synonymes:** 3,6-Dichloro-4H-thieno[3,2-e]-1,2,4-thiadiazine 1,1-dioxide; 3-Chloro-thiadiazine **Literature:** Nielsen F.E. et al. 6-Chloro-3-alkylamino-4H-thieno[3,2-e]-1,2,4-thiadiazine 1,1-Dioxide Derivatives Potently and Selectively Activate ATP Sensitive Potassium Channels of Pancreatic beta-Cells. J. Med. Chem. 2002, 45, 4171-4187.	**4910.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
5000	**DMTEAN** **Precursor for [^{18}F]FDDNP** Due to patent related reasons we regret that we are not allowed to sell the product to the following countries: USA, Canada, Australia, Japan, Hongkong, and European Union. $C_{25}H_{23}N_3O_3S$ **Molar Mass:** 445.53 [259739-02-1] Reddish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: Propanedinitrile, [1-[6-[methyl[2-[[(4-methylphenyl)-sulfonyl]oxy]ethyl]amino]-2-naphthalenyl]ethylidene]- **Synonymes:** 2-(1-6-[(2-(p-Toluolsulfonyloxy)ethyl)(methyl)amino]-2-naphthylethyliden)malonitrile **Literature:** Barrio J. et al. Neurofibrillary tangles (NFTs) and beta-amyloid plaques (A-beta) demonstrated in vivo in Alzheimer´s disease (AD) patients. J. Cereb. Blood Flow Metab. 1999, 19, S2. Adgeppa E.D. et al. Binding Characteristics of Radiofluorinated 6-Dialkylamino-2-Naphthylethylidene Derivatives as Positron Emission Tomography Imaging Probes for beta-Amyloid plaques in Alzheimer´s Disease. J. Neurosci. 2001, 21, RC189.	**5000.0010: 10 mg per vial** **5000.0020: 20 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
5010	**DFEAN** **Precursor for [^{11}C]FDDNP** Due to patent related reasons we regret that we are not allowed to sell the product to the following countries: USA, Canada, Australia, Japan, Hongkong, and European Union. $C_{17}H_{14}FN_3$ **Molar Mass:** 279.31 [1161260-63-4] ([^{18}F]DFEAN) Reddish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H, ^{13}C and ^{19}F NMR spectra **Chemical Name:** Propanedinitrile, [1-[6-[2-fluoroethyl]amino]-2-naphthalenyl]ethylidene]- **Synonymes:** 2-1-[6-(2-Fluoro-ethylamino)-naphthalen-2-yl]-ethylidene-malononitrile **Literature:** Barrio J. et al. Neurofibrillary tangles (NFTs) and beta-amyloid plaques (A-beta) demonstrated in vivo in Alzheimer´s disease (AD) patients. J. Cereb. Blood Flow Metab. 1999, 19, S2. Adgeppa E.D. et al. Binding Characteristics of Radiofluorinated 6-Dialkylamino-2-Naphthylethylidene Derivatives as Positron Emission Tomography Imaging Probes for beta-Amyloid plaques in Alzheimer´s Disease. J. Neurosci. 2001, 21, RC189.	**5010.0010: 10 mg per vial** **5010.0020: 20 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
5020	**DMEAN** **Precursor for [^{18}F]FDDNP**	**5020.0010: 10 mg per vial** **5020.0020: 20 mg per vial** **Please inquire for customized filling and bulk quantities.**



Due to patent related reasons we regret that we are not allowed to sell the product to the following countries: USA, Canada, Australia, Japan, Hongkong, and European Union.

$C_{18}H_{17}N_3O$ **Molar Mass:** 291.35

[259739-01-0]

Reddish solid packaged in dark glass screw cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H and ^{13}C NMR spectra

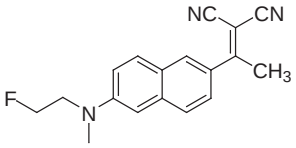
Chemical Name:
CA index name: Propanedinitrile,
[1-[6-[methyl[2-[hydroxy]ethyl]amino]-2-naphthalenyl]ethylidene]-

Synonymes:
2-(1-6-[(2-Hydroxy)ethyl)(methyl)amino]-2-naphthylethyliden)malonitrile;
2-(1,1-dicyanopropen-2-yl)-6-methyl-(2-hydroxoethyl)-amino)-naphthalene

Literature:
Barrio J. et al. Neurofibrillary tangles (NFTs) and beta-amyloid plaques (A-beta) demonstrated in vivo in Alzheimer´s disease (AD) patients. J. Cereb. Blood Flow Metab. 1999, 19, S2.

Adgeppa E.D. et al. Binding Characteristics of Radiofluorinated 6-Dialkylamino-2-Naphthylethylidene Derivatives as Positron Emission Tomography Imaging Probes for beta-Amyloid plaques in Alzheimer´s Disease. J. Neurosci. 2001, 21, RC189.

Product Number	Product	Order number / Unit
5030	**DMFEAN** **Reference standard for [^{18}F]FDDNP**	**5030.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**



Due to patent related reasons we regret that we are not allowed to sell the product to the following countries: USA, Canada, Australia, Japan, Hongkong, and European Union.

$C_{18}H_{16}FN_3$ **Molar Mass:** 293.34

[590365-47-2]

Red solid packaged in dark glass screw cap vials.

Purity: > 95 %

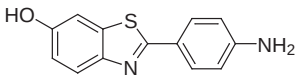
Certificates:
CoA; ^{1}H, ^{13}C and ^{19}F NMR spectra

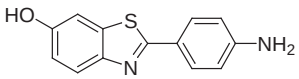
Chemical Name:
CA index name: Propanedinitrile,
[1-[6-[(2-fluoroethyl)methylamino]-2-naphthalenyl]ethylidene]-

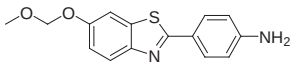
Synonymes:
2-(1,1-Dicyanopropen-2-yl)-6-(fluoroethyl)-methylamino)-naphthalene

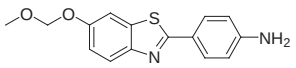
Literature:
Barrio J. et al. Neurofibrillary tangles (NFTs) and beta-amyloid plaques (A-beta) demonstrated in vivo in Alzheimer´s disease (AD) patients. J. Cereb. Blood Flow Metab. 1999, 19, S2.

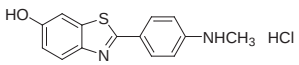
Adgeppa E.D. et al. Binding Characteristics of Radiofluorinated 6-Dialkylamino-2-Naphthylethylidene Derivatives as Positron Emission Tomography Imaging Probes for beta-Amyloid plaques in Alzheimer´s Disease. J. Neurosci. 2001, 21, RC189.

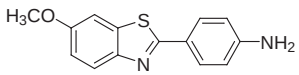
Product Number	Product	Order number / Unit
5100	**6-OH-BTA-0** **Precursor for [N-Methyl-^{11}C]-6-OH-BTA-1** **Precursor for [O-Methyl-^{11}C]-6-MeO-BTA-0** $C_{13}H_{10}N_2OS$ **Molar Mass:** 242.3 [178804-18-7] Yellowish to green solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 6-Benzothiazolol, 2-(4-aminophenyl)- **Synonymes:** 2-(4´-Aminophenyl)-6-hydroxybenzothiazole; Pittsburgh Compound B (PiB)-precursor **Literature:** Mathis C.A. et al. Synthesis and Evaluation of ^{11}C-Labeled 6-Substituted 2-Arylbenzothiazoles as Amyloid Imaging Agents J. Med. Chem. 2003, 46, 2740-2754. Wilson A.A. et al. A rapid one-step radiosynthesis of the (-amyloid imaging radiotracer N-methyl-[^{11}C]2-4´-methylaminophenyl)-6-hydroxybenzothiazole ([^{11}C]-6-OH-BTA-1) J. Labelled Compd. Radiopharm. 2004, 47, 679-682.	**5100.0001: 1 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
5101	**6-OH-BTA-0 (GMP)** **Precursor for [N-Methyl-^{11}C]-6-OH-BTA-1** **Precursor for [O-Methyl-^{11}C]-6-MeO-BTA-0** Manufactured according to GMP requirements for APIs for use in clinical trials (ICH Q7 chapter 19) $C_{13}H_1N_2OS$ **Molar Mass:** 242.3 [178804-18-7] Yellowish to green solid packaged in dark glass crimp cap vials. **Purity:** ≥ 97 % **Certificates:** CoA with NMR spectra (identity); HPLC (purity); GC (residual solvents, water content); Content Palladium (ICP-MS); microbiology test **Chemical Name:** CA index name: 6-Benzothiazolol, 2-(4-aminophenyl)- **Synonymes:** 2-(4´-Aminophenyl)-6-hydroxybenzothiazole; Pittsburgh Compound B (PiB)-precursor **Literature:** Same as product number 5100.	**5101.0001: 1 mg per vial** **5101.0002: 2 mg per vial** **Please inquire for customized filling and bulk quantities.** 

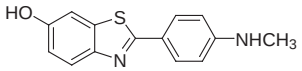
Product Number	Product	Order number / Unit
5110	**6-MOMO-BTA-0** **Precursor for [N-Methyl-^{11}C]-6-OH-BTA-1** $C_{15}H_{14}N_2O_2S$ **Molar Mass:** 286.35 [566170-03-4] Colourless to yellowish solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Benzenamine, 4-[6-(methoxymethoxy)-2-benzothiazolyl]- **Synonymes:** 2-(4´-Aminophenyl)-6-methoxymethoxybenzothiazole; Pittsburgh Compound B (PiB)-MOM-precursor **Literature:** Mathis C.A. et al. Synthesis and Evaluation of ^{11}C-Labeled 6-Substituted 2-Arylbenzothiazoles as Amyloid Imaging Agents J. Med. Chem. 2003, 46, 2740-2754.	**5110.0001: 1 mg per vial** **5110.0001.5: 1.5 mg per vial** **5110.0002: 2 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
5111	**6-MOMO-BTA-0 (GMP)** **Precursor for [N-Methyl-^{11}C]-6-OH-BTA-1** Manufactured according to GMP requirements for APIs for use in clinical trials (ICH Q7 chapter 19) $C_{15}H_1N_2OS$ **Molar Mass:** 286.35 [566170-03-4] Colourless to yellowish solid packaged in dark glass crimp cap vials. **Purity:** $\geq$ 97 % **Certificates:** CoA with NMR spectra (identity); HPLC (purity); GC (residual solvents, water content); Content Palladium and Copper (AAS); microbiology test **Chemical Name:** CA index name: Benzenamine, 4-[6-(methoxymethoxy)-2-benzothiazolyl]- **Synonymes:** 2-(4´-Aminophenyl)-6-methoxymethoxybenzothiazole; Pittsburgh Compound B (PiB)-MOM-precursor **Literature:** Same as product number 5110.	**5111.0005: 5 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
5120	**6-OH-BTA-1 hydrochloride** **Reference standard for [N-Methyl-^{11}C]-6-OH-BTA-1** $C_{14}H_{12}N_2OS \cdot HCl$ **Molar Mass:** 292.78 CAS-RN not yet assigned Yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** 6-Benzothiazolol, 2-[4-(methylamino)phenyl] hydrochloride **Synonymes:** 2-[4´-(Methylamino)phenyl]-6-hydroxybenzothiazole hydrochloride; Pittsburgh Compound B (PiB) hydrochloride **Literature:** Mathis C.A. et al. Synthesis and Evaluation of ^{11}C-Labeled 6-Substituted 2-Arylbenzothiazoles as Amyloid Imaging Agents J. Med. Chem. 2003, 46, 2740-2754.	**5120.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
5130	**6-MeO-BTA-0** **Reference standard for [O-Methyl-^{11}C]6-MeO-BTA-0** $C_{14}H_{12}N_2OS$ **Molar Mass:** 256.32 [43036-17-5] Yellow solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Benzenamine, 4-(6-methoxy-2-benzothiazolyl)- **Synonymes:** 2-(4´-Aminophenyl)-6-methoxybenzothiazole **Literature:** Mathis C.A. et al. Synthesis and Evaluation of ^{11}C-Labeled 6-Substituted 2-Arylbenzothiazoles as Amyloid Imaging Agents J. Med. Chem. 2003, 46, 2740-2754.	**5130.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
5140	**6-OH-BTA-1 (free base)** **Reference standard for [N-Methyl-^{11}C]-6-OH-BTA-1**	**5140.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**



$C_{14}H_{12}N_2OS$ **Molar Mass:** 256.32

[566169-93-5]

Yellow solid packaged in dark glass screw cap vials.

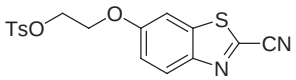
Purity: > 95 %

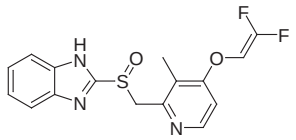
Certificates:
CoA; ^{1}H NMR spectrum

Chemical Name:
CA index name: 6-Benzothiazolol, 2-[4-(methylamino)phenyl]-

Synonymes:
2-[4´-(Methylamino)phenyl]-6-hydroxybenzothiazole; Pittsburgh Compound B (PiB)

Literature:
Mathis C.A. et al. Synthesis and Evaluation of ^{11}C-Labeled 6-Substituted 2-Arylbenzothiazoles as Amyloid Imaging Agents J. Med. Chem. 2003, 46, 2740-2754.

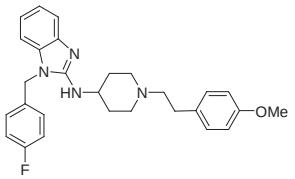
Product Number	Product	Order number / Unit
5149	**6-O-Tosyloxyethyl-CBT** **Precursor for [^{18}F]-labeling of N-terminal cysteine-bearing peptides and proteines** $C_{17}H_{14}N_2O_4S_2$ **Molar Mass:** 374.44 [1392498-16-6] Colourless to yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: 2-Benzothiazolecarbonitrile, 6-[2-[[(4-methylphenyl)sulfonyl]oxy]ethoxy]- **Synonymes:** 2-(2-cyanobenzothiazol-6-yloxy) 4-methylbenzenesulfonate; TE-CBT **Literature:** Ren H. et al. A biocompatible condensation reaction for the labeling of terminal cysteine residues on proteins. Angew. Chem. Int. Ed. 2009, 48, 9658-9662. Jeon J. et al. Efficient method for site-specific 18F-labeling of biomolecules using the rapid condensation reaction between 2-cyanobenzothiazole and cysteine. Bioconjugate Chem. 2012 , 23, 1902 - 1908. Godinat A. et al. A biocompatible in vivo ligation reaction and its application for noninvasive bioluminescent imaging of protease activity in living mice. ACS Chem. Biol. 2013, 8, 987-999.	**5149.0002: 2 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
5150	**[^{18}F]Lansoprazole Precursor** **Precursor for [^{18}F]Lansoprazole** $C_{16}H_{13}F_2N_3O_2S$ **Molar Mass:** 349.36 [1613520-76-5] Off-white to brownish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 1H-Benzimidazole, 2-[[[4-[(2,2-difluoroethenyl)oxy]-3-methyl-2-pyridinyl]methyl]sulfinyl]- **Synonymes:** 2-(((5-((2,2-difluorovinyl)oxy)-3-methylpyridin-2-yl)methyl)sulfinyl)-1Hbenzo[d]imidazole; 2-[4-(2,2-Difluoro-vinyloxy)-3-methyl-pyridin-2-ylmethanesulfinyl]-1H-benzoimidazole; [^{18}F]LNS precursor **Literature:** Fawaz M. V. et al. High Affinity Radiopharmaceuticals Based upon Lansoprazole for PET Imaging of Aggregated Tau in Alzheimer's Disease and Progressive Supranuclear Palsy: Synthesis, Pre-clinical Evaluation and Lead Selection. ACS Chem. Neurosci. 2014, 5, 718-730.	**5150.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
5165	**Astemizole** **Reference standard for [^{11}C]Astemizole**	**Please inquire for customized filling and bulk quantities.**

$C_{28}H_{31}FN_4O$ **Molar Mass:** 458.57

[68844-77-9]



Colourless to off-white solid packaged in dark glass screw cap vials or dark glass crimp cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H HMR spectrum

Chemical Name:
1-(4-fluorophenylmethyl)-N-1-[2-(4-methoxyphenyl)ethyl]-4-piperidinyl-1H-benzimidazol-2-amine

Synonymes:
1-(4-Fluorbenzyl)-N-1-[2-(4-methoxyphenyl)ethyl]-4-piperidyl-1H-benzimidazol- 2-ylamin; [1-(4-Fluoro-benzyl)-1H-benzoimidazol-2-yl]-1-[2-(4-methoxy-phenyl)-ethyl]-piperidin-4-yl-amine; [^{11}C]Astemizole standard

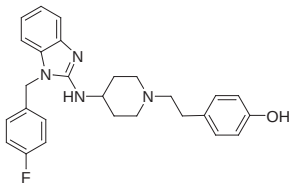
Literature:
Riss P. J. et al. Radiosynthesis and characterization of astemizole derivatives as lead compounds toward PET imaging of τ-pathology. Med. Chem. Commun. 2013, 4, 852-855.

Cai L. et al. Synthesis of [^{11}C]astemizole as a lead candidate radioligand for imaging brain neurofibrillary tangles. Neuroimage 2010, 52, Supplement 1, S152-S153

Product Number	Product	Order number / Unit
5166	**O-Desmethyl Astemizole** **Precursor for [^{11}C]Astemizole and [^{18}F]Fluoroethyl-astemizole**	**Please inquire for customized filling and bulk quantities.**

$C_{27}H_{29}FN_4O$ **Molar Mass:** 444.54

[73736-50-2]



Colourless to off-white solid packaged in dark glass screw cap vials or dark glass crimp cap vials.

Purity: > 95 %

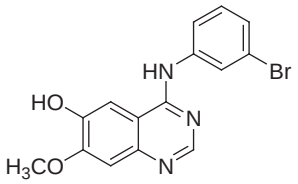
Certificates:
CoA; ^{1}H and ^{19}F NMR spectra

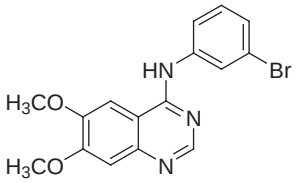
Chemical Name:
4-[2-[4-[[1-[(4-Fluorophenyl)methyl]-1H-benzimidazol-2-yl]amino]-1-piperidinyl]ethyl]phenol

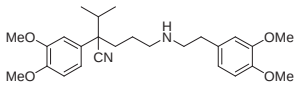
Synonymes:
O-desmethylastemizole; 4-(2-4-[1-(4-Fluoro-benzyl)-1H-benzoimidazol-2-ylamino]-piperidin-1-yl-ethyl)-phenol; [^{11}C]Astemizole precursor; [^{18}F]Astemizole precursor

Literature:
Riss P. J. et al. Radiosynthesis and characterization of astemizole derivatives as lead compounds toward PET imaging of τ-pathology. Med. Chem. Commun. 2013, 4, 852-855.

Cai L. et al. Synthesis of [^{11}C]astemizole as a lead candidate radioligand for imaging brain neurofibrillary tangles. Neuroimage 2010, 52, Supplement 1, S152-S153

Product Number	Product	Order number / Unit
5200	**Desmethyl-PD 153035** **Precursor for [Methoxy-^{11}C]PD 153035** **Potent and specific inhibitor of the EFG receptor tyrosine kinase** $C_{15}H_{12Br}N_3O_2$ **Molar Mass:** 346.18 [295330-61-9] Yellowish solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 6-Quinazolinol, 4-[(3-bromophenyl)amino]-7-methoxy- **Synonymes:** 4-Quinazolinamine, N-(3-bromphenyl)-6-hydroxy-7-methoxy-; 4-(3-Bromophenylamino)-7-methoxyquinazolin-6-ol; 4-[(3-Bromophenyl)amino]-6-hydroxy-7-methoxyquinazoline **Literature:** Fredriksson A. et al. In vivo evaluation of the biodistribution of ^{11}C-labeled PD153035 in rats without and with neuroblastoma implants Life Sci. 1999, 65, 165-174. Johnström P. et al. Synthesis of [Methoxy-^{11}C]PD153035, a Selective EGF Receptor Tyrosine Kinase Inhibitor J. Labelled Compd. Radiopharm. 1998, 41, 623-629. Gibson K.H. et al. Epidermal growth factor receptor tyrosine kinase: Structure-activity relationships and antitumour activity of novel quinazolines Bioorg. Med. Chem. Lett. 1997, 7, 2723-2728.	**5200.0001: 1 mg per vial** **Please inquire for customized filling and bulk quantities.** 

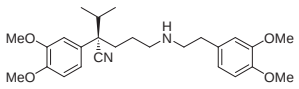
Product Number	Product	Order number / Unit
5210	**PD 153035** **Reference standard for [Methoxy-^{11}C]PD 153035** **Potent and specific inhibitor of the EFG receptor tyrosine kinase** $C_{16}H_{14Br}N_3O_2$ **Molar Mass:** 360.21 [153436-54-5] Yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 4-Quinazolinamine, N-(3-bromphenyl)-6,7-dimethoxy- **Synonymes:** 4-(3-Bromphenylamino)-6,7-bis(methoxy)quinazoline; 4-(3-Bromphenylamino)-6,7-dimethylquinazoline; AG 1517; NSC 669364; SU 5271; WHI-P 79 **Literature:** Fredriksson A. et al. In vivo evaluation of the biodistribution of ^{11}C-labeled PD153035 in rats without and with neuroblastoma implants Life Sci. 1999, 65, 165-174. Johnström P. et al. Synthesis of [Methoxy-^{11}C]PD153035, a Selective EGF Receptor Tyrosine Kinase Inhibitor J. Labelled Compd. Radiopharm. 1998, 41, 623-629. Gibson K.H. et al. Epidermal growth factor receptor tyrosine kinase: Structure-activity relationships and antitumour activity of novel quinazolines Bioorg. Med. Chem. Lett. 1997, 7, 2723-2728.	**5210.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

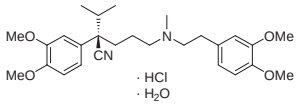
Product Number	Product	Order number / Unit
5600	**Norverapamil** **Precursor for [^{11}C]Verapamil** $C_{26}H_{36}N_2O_4$ **Molar Mass:** 440.58 [67018-85-3] Yellowish to brownish oil packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: Benzeneacetonitrile, α-[3-[[2-(3,4-dimethoxyphenyl)-ethyl]amino]propyl]-3,4-dimethoxy-α-(1-methylethyl)- **Synonymes:** 5-[(3,4-dimethoxyphenethyl)amino]-2-(3,4-dimethoxyphenyl)-2-isopropylvaleronitrile; 2-(3,4-Dimethoxyphenyl)-2-isopropyl-5-(3,4-dimethoxyphenethylamino)valeronitrile; α-[3-[[2-(3,4-Dimethoxyphenyl)ethyl]amino]propyl]-3,4-dimethoxy-α-isopropylbenzeneacetonitrile; ($\pm$)-Norverapamil	**5600.0000.5: 0.5 mg per vial** **5600.0001: 1 mg per vial** **5600.0002: 2 mg per vial** **Please inquire for customized filling and bulk quantities.** 

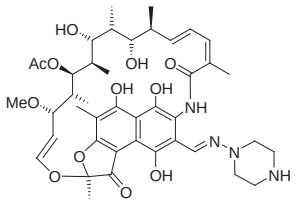
Literature:

Luurtsema G. et al. Fully automated high yield synthesis of (R)- and (S)-[^{11}C]verapamil for measuring p-glycoprotein function with positron emission tomography. J. Labelled Compd. Radiopharm. 2000, 45, 1199-1207.

Wegmann T.D. et al. An improved method for the preparation of [^{11}C]verapamil. Appl. Radiat. Isot. 2002, 57, 505-507.

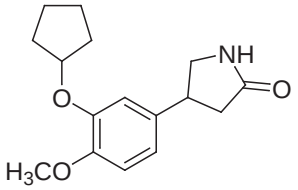
Product Number	Product	Order number / Unit
5620	**(-)-Norverapamil** **Precursor for (-)-[^{11}C]Verapamil** $C_{26}H_{36}N_2O_4$ **Molar Mass:** 440.58 [123931-31-7] Yellowish to brownish oil packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: Benzeneacetonitrile, α-[3-[[2-(3,4-dimethoxyphenyl)-ethyl]amino]propyl]-3,4-dimethoxy-α-(1-methylethyl)-, (αS)- **Synonymes:** (αS)-α-[3-[[2-(3,4-Dimethoxyphenyl)ethyl]amino]propyl]-3,4-dimethoxy-α-(1-methylethyl)-benzeneacetonitrile; S-Norverapamil **Literature:** Luurtsema G. et al. Fully automated high yield synthesis of (R)- and (S)-[^{11}C]verapamil for measuring p-glycoprotein function with positron emission tomography. J. Labelled Compd. Radiopharm. 2000, 45, 1199-1207. Wegmann T.D. et al. An improved method for the preparation of [^{11}C]verapamil. Appl. Radiat. Isot. 2002, 57, 505-507.	**5620.0000.5: 0.5 mg per vial** **5620.0001: 1 mg per vial** **5620.0002: 2 mg per vial** **Please inquire for customized filling and bulk quantities.** 

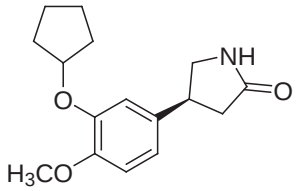
Product Number	Product	Order number / Unit
5630	**(+)-Verapamil hydrochloride** **Reference standard for (+)-[^{11}C]Verapamil** $C_{27}H_{38}N_2O_4 \cdot HCl \cdot H_2O$ **Molar Mass:** 509.08 [38176-02-2] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Benzeneacetonitrile, α-[3-[[2-(3,4-dimethoxyphenyl)ethyl]methylamino]propyl]-3,4-dimethoxy-α-(1-methylethyl)-, monohydrochloride, (αR)- **Synonymes:** Benzeneacetonitrile, α-[3-[[2-(3,4-dimethoxyphenyl)ethyl]-methylamino]propyl]-3,4-dimethoxy-α-(1-methylethyl)-, monohydrochloride, (R)-; (+)-Verapamil hydrochloride; (R)-Verapamil hydrochloride; (R)-(+)-Verapamil monohydrochloride monohydrate; Dexverapamil monohydrochloride; LU 33925 **Literature:** Luurtsema G. et al. Fully automated high yield synthesis of (R)- and (S)-[^{11}C]verapamil for measuring p-glycoprotein function with positron emission tomography. J. Labelled Compd. Radiopharm. 2000, 45, 1199-1207. Wegmann T.D. et al. An improved method for the preparation of [^{11}C]verapamil. Appl. Radiat. Isot. 2002, 57, 505-507.	**5630.0001: 1 mg per vial** **Please inquire for customized filling and bulk quantities.** 

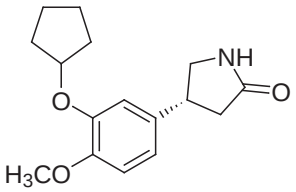
Product Number	Product	Order number / Unit
5700	**N-Demethylrifampicin** **Precursor for [^{11}C]Rifampicin** $C_{42}H_{56}N_4O_{12}$ **Molar Mass:** 808.91 [13292-45-0] Red solid packaged in glass vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Rifamycin, 3-[(1-piperazinylimino)methyl]- **Synonymes:** 4-N-Demethylrifampicin; Demethylrifampicin; 2,7-(Epoxypentadeca[1,11,13]trienimino)naphtho[2,1-b]furan-1,11(2H)-dione, 5,6,9,17,19,21-hexahydroxy-23-methoxy-2,4,12,16,18,20,22-heptamethyl-8-(N-1-piperazinylformimidoyl)-, 21-acetate	**5700.0001: 1 mg per vial** **Please inquire for customized filling and bulk quantities.** 

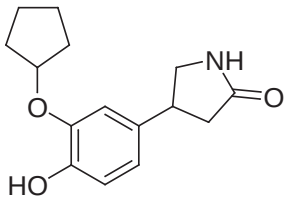
Literature:

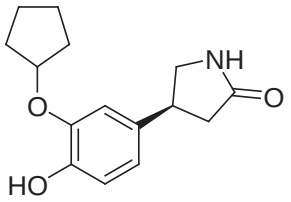
Liu W. et al. Radiosynthesis and Bioimaging of the Tuberculosis Chemotherapeutics Isoniazid, Rifampicin and Pyrazinamide in Baboons. J. Med. Chem. 2010, 53, 2882-289

Product Number	Product	Order number / Unit
6000	**Rolipram** **Reference standard for [^{11}C]Rolipram** $C_{16}H_{21}NO_3$ **Molar Mass:** 275.35 [61413-54-5] Yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 2-Pyrrolidinone, 4-[3-(cyclopentyloxy)-4-methoxyphenyl]- **Synonymes:** 4-[3-(Cyclopentyloxy)-4-methoxyphenyl]-2-pyrrolidinone; (±)-Rolipram; (R,S)-Rolipram; SB 95952; ZK 62711 **Literature:** Kenk M. et al. In vivo selective binding of (R)-[^{11}C]rolipram to phosphodiesterase-4 provides the basis for studying intracellular cAMP signaling in the myocardium and other peripheral tissues. Nucl. Med. Biol. 2007, 34, 71-77. Parker C.A. et al. Behaviour of [^{11}C]R(-)- and [^{11}C]S(+)-rolipram in vitro and in vivo, and their use as PET radiotracers for the quantificative assay of PDE4. Synapse 2005, 55, 270-279. Lourenco C.M. et al. Characterization of R-[^{11}C]rolipram for PET imaging of phosphodiesterase-4: in vivo binding, metabolism, and dosimetry studies in rats. Nucl. Med. Biol. 2001, 28, 347-358. Tsukada H. et al. Facilitation of dopaminergic neural transmission does not affect [^{11}C]SCH23390 binding to the striatal D1 dopamine receptors, but the facilitation enhances phosphodiesterase type-IV actvity through D1 receptors: PET studies in the conscious monkey brain. Synapse 2001, 42, 258-265.	**6000.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
6010	**(S)-(+)-Rolipram** **Reference standard for [^{11}C]-(S)-Rolipram** $C_{16}H_{21}NO_3$ **Molar Mass:** 275.35 [85416-73-5] Colourless to off-white solid packaged in dark glass vials. **Purity:** ≥ 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** 2-Pyrrolidinone, 4-[3-(cyclopentyloxy)-4-methoxyphenyl]-, (4S)- **Synonymes:** (4S)-4-[3-(Cyclopentoxy)-4-methoxyphenyl]pyrrolidin-2-one **Literature:** Krause W. et al Anti-inflammatory Activity of Rolipram in a Rat Ear Edema Model Arzneim.-Forsch./Drug. Res. 1994, 44, 163-165. Pfeffer M. et al In vitro and in vivo Characterization of two Sustained Release Formulations for the Antidepressant Rolipram Arzneim.- Forsch./Drug Res. 1990, 40, 1191-1194.	**6010.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
6020	**(R)-(-)-Rolipram** **Reference standard for [^{11}C]-(R)-Rolipram** $C_{16}H_{21}NO_3$ **Molar Mass:** 275.35 [85416-75-7] Colourless to off-white solid packaged in dark glass vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** 2-Pyrrolidinone, 4-[3-(cyclopentyloxy)-4-methoxyphenyl]-, (4R)- **Synonymes:** (4R)-4-[3-(Cyclopentoxy)-4-methoxyphenyl]pyrrolidin-2-one **Literature:** Krause W. et al Anti-inflammatory Activity of Rolipram in a Rat Ear Edema Model Arzneim.-Forsch./Drug. Res. 1994, 44, 163-165. Pfeffer M. et al In vitro and in vivo Characterization of two Sustained Release Formulations for the Antidepressant Rolipram Arzneim.- Forsch./Drug Res. 1990, 40, 1191-1194.	**6020.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
6030	**Desmethyl-Rolipram** **Precursor for [^{11}C]Rolipram** $C_{15}H_{19}NO_3$ **Molar Mass:** 261.32 [150519-28-1] Yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 2-Pyrrolidinone, 4-[3-(cyclopentyloxy)-4-hydroxyphenyl]- **Synonymes:** ($\pm$)-Desmethyl-Rolipram; (R,S)-Desmethyl-Rolipram **Literature:** Kenk M. et al. In vivo selective binding of (R)-[^{11}C]rolipram to phosphodiesterase-4 provides the basis for studying intracellular cAMP signaling in the myocardium and other peripheral tissues. Nucl. Med. Biol. 2007, 34, 71-77. Parker C.A. et al. Behaviour of [^{11}C]R(-)- and [^{11}C]S(+)-rolipram in vitro and in vivo, and their use as PET radiotracers for the quantificative assay of PDE4. Synapse 2005, 55, 270-279. Lourenco C.M. et al. Characterization of R-[^{11}C]rolipram for PET imaging of phosphodiesterase-4: in vivo binding, metabolism, and dosimetry studies in rats. Nucl. Med. Biol. 2001, 28, 347-358. Tsukada H. et al. Facilitation of dopaminergic neural transmission does not affect [^{11}C]SCH23390 binding to the striatal D1 dopamine receptors, but the facilitation enhances phosphodiesterase type-IV actvity through D1 receptors: PET studies in the conscious monkey brain. Synapse 2001, 42, 258-265.	**6030.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
6040	**(S)-(+)-Desmethyl-Rolipram** **Precursor for S-(+)-[^{11}C]Rolipram** $C_{15}H_{19}NO_3$ **Molar Mass:** 261.32 [347148-60-1] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 2-Pyrrolidinone, 4-[3-(cyclopentyloxy)-4-hydroxyphenyl]-, (4S)- **Synonymes:** S-Desmethyl-Rolipram; (+)-Desmethyl-Rolipram	**6040.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

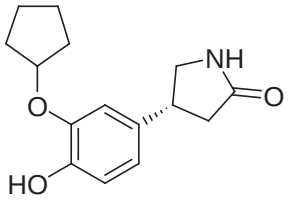
Literature:

Kenk M. et al. In vivo selective binding of (R)-[^{11}C]rolipram to phosphodiesterase-4 provides the basis for studying intracellular cAMP signaling in the myocardium and other peripheral tissues. Nucl. Med. Biol. 2007, 34, 71-77.

Parker C.A. et al. Behaviour of [^{11}C]R(-)- and [^{11}C]S(+)-rolipram in vitro and in vivo, and their use as PET radiotracers for the quantificative assay of PDE4. Synapse 2005, 55, 270-279.

Lourenco C.M. et al. Characterization of R-[^{11}C]rolipram for PET imaging of phosphodiesterase-4: in vivo binding, metabolism, and dosimetry studies in rats. Nucl. Med. Biol. 2001, 28, 347-358.

Tsukada H. et al. Facilitation of dopaminergic neural transmission does not affect [^{11}C]SCH23390 binding to the striatal D1 dopamine receptors, but the facilitation enhances phosphodiesterase type-IV actvity through D1 receptors: PET studies in the conscious monkey brain. Synapse 2001, 42, 258-265.

Product Number	Product	Order number / Unit
6050	**(R)-(-)-Desmethyl-Rolipram** **Precursor for R-(-)-[^{11}C]Rolipram** $C_{15}H_{19}NO_3$ **Molar Mass:** 261.32 [347148-59-8] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 2-Pyrrolidinone, 4-[3-(cyclopentyloxy)-4-hydroxyphenyl]-, (4R)- **Synonymes:** R-Desmethyl-Rolipram; (-)-Desmethyl-Rolipram	**6050.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

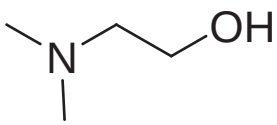
Literature:

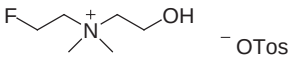
Kenk M. et al. In vivo selective binding of (R)-[^{11}C]rolipram to phosphodiesterase-4 provides the basis for studying intracellular cAMP signaling in the myocardium and other peripheral tissues. Nucl. Med. Biol. 2007, 34, 71-77.

Parker C.A. et al. Behaviour of [^{11}C]R(-)- and [^{11}C]S(+)-rolipram in vitro and in vivo, and their use as PET radiotracers for the quantificative assay of PDE4. Synapse 2005, 55, 270-279.

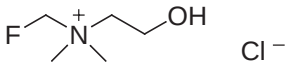
Lourenco C.M. et al. Characterization of R-[^{11}C]rolipram for PET imaging of phosphodiesterase-4: in vivo binding, metabolism, and dosimetry studies in rats. Nucl. Med. Biol. 2001, 28, 347-358.

Tsukada H. et al. Facilitation of dopaminergic neural transmission does not affect [^{11}C]SCH23390 binding to the striatal D1 dopamine receptors, but the facilitation enhances phosphodiesterase type-IV actvity through D1 receptors: PET studies in the conscious monkey brain. Synapse 2001, 42, 258-265.

Product Number	Product	Order number / Unit
6100	**Dimethylaminoethanol** **Precursor for [^{11}C]Choline** **Precursor for [^{18}F]Fluoroalkylcholine** $C_4H_{11}NO$ **Molar Mass:** 89.14 [108-01-0] Colourless liquid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Ethanol, 2-(dimethylamino)- **Synonymes:** 2-(Dimethylamino)ethanol; beta-(Dimethylamino)ethanol; 2-(Dimethylamino)ethyl alcohol; 2-(N,N-Dimethylamino)ethanol; Dimethyl(2-hydroxyethyl)amine; Dimethyl(hydroxyethyl)amine; Dimethylethanolamine; N,N-Dimethyl(2-hydroxyethyl)amine; N,N-Dimethyl-beta-hydroxyethylamine; N,N-Dimethylethanolamine; N,N-Dimethyl-N-(beta-hydroxyethyl)amine; Norcholine; DMEA **Literature:** Hara T. et al. PET imaging of prostate cancer using carbon-11-choline. J. Nucl. Med. 1998, 39, 990-995. Hara T. et al. PET imaging of brain tumor with [methyl-^{11}C]choline. J. Nucl. Med. 1997, 38, 842-847. Hara T. et al. Automated synthesis of [^{11}C]choline, a positronemitting tracer for tumor imaging. Appl. Radiat. Isot. 1999, 50, 531-533. Hara T. et al. Development of ^{18}F-fluoroethylcholine for cancer imaging with PET: synthesis, biochemistry, and prostate cancer imaging J. Nucl. Med. 2002, 43, 187-199. DeGrado T.R. et al. Synthesis and Evaluation of ^{18}F-Labeled Choline Analogs as Oncologic PET Tracers J. Nucl. Med. 2001, 42, 1805-1814.	**6100.0000.1: 0.1 ml (89 mg) per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
6120	**Fluoroethylcholine tosylate** **Reference standard for [^{18}F]Fluoroethylcholine** $C_6H_{15}FNO \cdot C_7H_7O_3S$ **Molar Mass:** 307.38 [479407-07-3] Colourless crystals packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: Ethanaminium, N-(2-fluoroethyl)-2-hydroxy-N,N-dimethyl-, salt with 4-methylbenzenesulfonic acid (1:1) **Synonymes:** FECh Tosylate **Literature:** Hara T. et al. Development of ^{18}F-fluoroethylcholine for cancer imaging with PET: synthesis, biochemistry, and prostate cancer imaging J. Nucl. Med. 2002, 43, 187-199. DeGrado T.R. et al. Synthesis and Evaluation of ^{18}F-Labeled Choline Analogs as Oncologic PET Tracers J. Nucl. Med. 2001, 42, 1805-1814.	**6120.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
6130	**Fluoromethylcholine chloride** **Reference standard for [^{18}F]Fluoromethylcholine**	**6130.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**



Caution, very sensitive to moisture and hygroscopic!

$C_5H_{13}ClFNO$ **Molar Mass:** 157.61

[459424-38-5]

Colourless crystals packaged in dark glass screw cap vials.

Purity: > 90 %

Certificates:
CoA; ^{1}H and ^{19}F NMR spectra

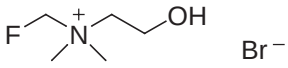
Chemical Name:
CA index name: Ethanaminium,
N-(fluoromethyl)-2-hydroxy-N,N-dimethyl-, chloride

Synonymes:
Fluorocholine Chloride; FCh Chloride

Literature:
DeGrado T.R. et al. Synthesis and evaluation of ^{18}F-labeled choline as an oncologic tracer for positron emission tomography: initial findings in prostate cancer. Cancer Res. 2001, 61, 110-7.

Iwata R. et al. [^{18}F]Fluoromethyl triflate, a novel and reactive [^{18}F]Fluoromethylating agent: Preparation and application to the on-column preparation of [^{18}F]Fluorocholine. Appl. Radiat. Isotop. 2002, 57, 347-352.

Product Number	Product	Order number / Unit
6140	**Fluoromethylcholine bromide** **Reference standard for [^{18}F]Fluoromethylcholine**	**6140.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**



Caution, very sensitive to moisture and hygroscopic!

$C_5H_{13Br}FNO$ **Molar Mass:** 202.07

CAS-RN not yet assigned

Colourless crystals packaged in dark glass screw cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H and ^{19}F NMR spectra

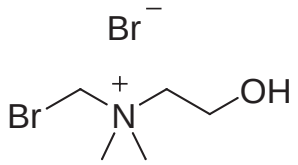
Chemical Name:
Ethanaminium, N-(fluoromethyl)-2-hydroxy-N,N-dimethyl-, bromide

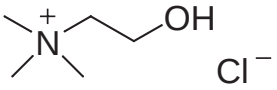
Synonymes:
Fluorocholine Bromide; FCh Bromide

Literature:
DeGrado T.R. et al. Synthesis and evaluation of ^{18}F-labeled choline as an oncologic tracer for positron emission tomography: initial findings in prostate cancer. Cancer Res. 2001, 61, 110-7.

DeGrado T.R. et al. Synthesis and Evaluation of ^{18}F-Labeled Choline Analogs as Oncologic PET Tracers J. Nucl. Med. 2001, 42, 1805-1814.

Iwata R. et al. [^{18}F]Fluoromethyl triflate, a novel and reactive [^{18}F]Fluoromethylating agent: Preparation and application to the on-column preparation of [^{18}F]Fluorocholine. Appl. Radiat. Isotop. 2002, 57, 347-352.

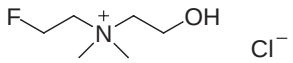
Product Number	Product	Order number / Unit
6141	**Bromocholine bromide** **Reference standard for byproduct of [^{18}F]Fluoromethylcholine synthesis** Caution, very sensitive to moisture and hygroscopic! $C_5H_{13Br2}NO$ **Molar Mass:** 262.97 [28508-20-5] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** (bromomethyl)(2-hydroxyethyl)dimethylammonium bromide **Synonymes:** N,N-Dimethyl-N-(bromomethyl)ethan-2-ol ammonium bromide; N-(Bromomethyl)-2-hydroxy-N,N-dimethylethanaminium bromide; Bromomethylcholine bromide **Literature:**	**6141.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
6150	**Choline chloride** **Reference standard for [^{11}C]Choline** Caution, sensitive to light and moisture (hygroscopic)! $C_5H_{14}ClNO$ **Molar Mass:** 139.62 [67-48-1] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Ammonium, (2-hydroxyethyl)trimethyl-, chloride **Synonymes:** Choline chlorohydrate; (2-Hydroxyethyl)trimethylammonium chloride **Literature:**	**6150.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

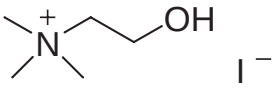
Hara T. et al. PET imaging of prostate cancer using carbon-11-choline. J. Nucl. Med. 1998, 39, 990-995.

Hara T. et al. PET imaging of brain tumor with [methyl-^{11}C]choline. J. Nucl. Med. 1997, 38, 842-847.

Hara T. et al. Automated synthesis of [^{11}C]choline, a positronemitting tracer for tumor imaging. Appl. Radiat. Isot. 1999, 50, 531-533.

Product Number	Product	Order number / Unit
6160	**Fluoroethylcholine chloride** **Reference standard for [^{18}F]Fluoroethylcholine** $C_6H_{15}ClFNO$ **Molar Mass:** 171.64 [479407-08-4] Yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: Ethanaminium, N-(2-fluoroethyl)-2-hydroxy-N,N-dimethyl-, chloride **Synonymes:** FECh chloride; FEtCh chloride **Literature:** Hara T. et al. Development of ^{18}F-fluoroethylcholine for cancer imaging with PET: synthesis, biochemistry, and prostate cancer imaging J. Nucl. Med. 2002, 43, 187-199. DeGrado T.R. et al. Synthesis and Evaluation of ^{18}F-Labeled Choline Analogs as Oncologic PET Tracers J. Nucl. Med. 2001, 42, 1805-1814.	**6160.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
6170	**Choline iodide** **Reference standard for [^{11}C]Choline**	**6170.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**



Caution, sensitive to light and moisture (hygroscopic)!

$C_5H_{14}INO$ **Molar Mass:** 231.08

[17773-10-3]

Colourless solid packaged in dark glass screw cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H NMR spectrum

Chemical Name:
CA index name: Ammonium, (2-hydroxyethyl)trimethyl-, iodide

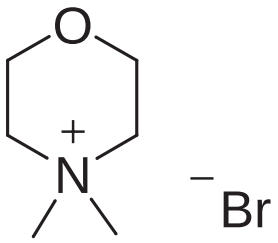
Synonymes:
Choline iodohydrate; Choline hydriodide

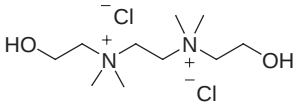
Literature:

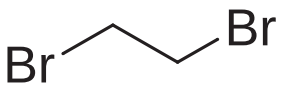
Hara T. et al. PET imaging of prostate cancer using carbon-11-choline. J. Nucl. Med. 1998, 39, 990-995.

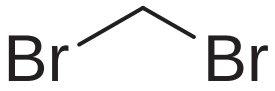
Hara T. et al. PET imaging of brain tumor with [methyl-^{11}C]choline. J. Nucl. Med. 1997, 38, 842-847.

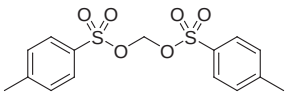
Hara T. et al. Automated synthesis of [^{11}C]choline, a positronemitting tracer for tumor imaging. Appl. Radiat. Isot. 1999, 50, 531-533.

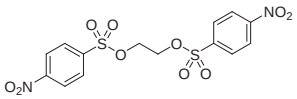
Product Number	Product	Order number / Unit
6173	**DMMB** **Reference standard for byproduct of [^{18}F]Fluoroethylcholine synthesis** $C_6H_{14Br}NO$ **Molar Mass:** 196.09 [40968-70-5] Yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95% **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index names: Morpholinium, 4,4-dimethyl-, bromide (1:1); 4,4-Dimethylmorpholinium bromide; Morpholinium, 4,4-dimethyl-, bromide **Synonymes:** N,N'-Dimethylmorpholinium bromide **Literature:** keine Literatur zur Anwendung bekannt, wird also nicht angegeben. Zur Synthese siehe: Faust, G. Journal fuer Praktische Chemie (Leipzig) 1963 V21(3-4) P113-30	**61.730.100** **Please inquire for customized filling and bulk quantities.** 

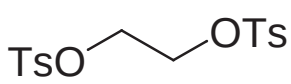
Product Number	Product	Order number / Unit
6174	**BHTMEDA** **Reference standard for byproduct of [^{18}F]Fluoroethylcholine synthesis** $C_{10}H_{26}Cl_2N_2O_2$ **Molar Mass:** 277.23 [60168-37-8] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95% **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index names: 1,2-Ethanediaminium, N1,N2-bis(2-hydroxyethyl)-N1,N1,N2,N2-tetramethyl-, chloride (1:2); 1,2-Ethanediaminium, N,N'-bis(2-hydroxyethyl)-N,N,N',N'-tetramethyl-, dichloride **Synonymes:** N,N'-Bis-(2-hydroxyethyl)-N,N,N',N'-tetra-methylethandiammonium dichlorid **Literature:** no literature reference available	**61.740.100** **Please inquire for customized filling and bulk quantities.** 

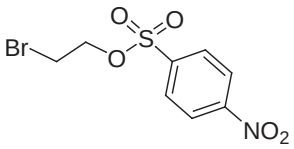
Product Number	Product	Order number / Unit
6175	**Dibromoethane** $C_2H_4Br_2$ **Molar Mass:** 187.86 [106-93-4] Colourless liquid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Ethane, 1,2-dibromo- **Synonymes:** α,β-Dibromoethane; α,ω-Dibromoethane; 1,2-Dibromoethane; Ethylene bromide; Ethylene dibromide; Glycol dibromide; sym-Dibromoethane **Literature:** no literature reference available	**6175.0000.5: 0.5 ml per vial** **Please inquire for customized filling and bulk quantities.** 

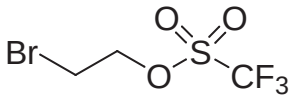
Product Number	Product	Order number / Unit
6176	**Dibromomethane** CH_2Br_2 **Molar Mass:** 173.83 [74-95-3] Colourless liquid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Methane, dibromo- **Synonymes:** Methylene bromide; Methylene dibromide **Literature:** no literature reference available	**6176.0000.5: 0.5 ml per vial** **Please inquire for customized filling and bulk quantities.** 

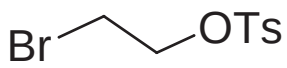
Product Number	Product	Order number / Unit
6177	**Bis(tosyloxy)methane** **Precursor for 1-[^{18}F]Fluoromethyl tosylate** $C_{15}H_{16}O_6S_2$ **Molar Mass:** 356.42 [24124-59-2] White solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index names: Methanediol, 1,1-bis(4-methylbenzenesulfonate); Methanediol, bis(4-methylbenzenesulfonate), Methanediol, di-p-toluenesulfonate **Synonymes:** Bis(tosyloxy)methane; Methylene bis(toluene-4-sulfonate); 1-methyl-4-[(4-methylphenyl)sulfonyloxymethoxysulfonyl]benzene; Methylene bis-tosylate **Literature:** Neal T.R. et al. Improved synthesis of [^{18}F]fluoromethyl tosylate, a convenient reagent for radiofluoromethylations. J. Label. Compd. Radiopharm. 2005, 48, 557-568.	**6177.0010: 10 mg per vial** **6177.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

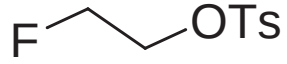
Product Number	Product	Order number / Unit
6179	**1,2-Bis(nosyloxy)ethane** **Precursor for 1-[^{18}F]Fluoro-2-nosyloxy-ethane** $C_{14}H_{12}N_2O_{10}S_2$ **Molar Mass:** 432.38 [25297-82-9] Colourless to yellow crystals packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Benzenesulfonic acid, 4-nitro-, 1,2-ethanediyl ester **Synonymes:** Benzenesulfonic acid, p-nitro-, ethylene ester; Ethylene glycol, bis(p-nitrobenzenesulfonate); Ethylene dinosylate; Ethylene glycol dinosylate; 1,2-Ethylene dinosylate; 1,2-Bis(nosyloxy)ethane; 1,2-Bis(4-nitrobenzenesulfonyloxy)ethane; 1,2-Bis(p-nitrobenzenesulfonyloxy)ethane; 1,2-Ethanediol dinosylate; Di-O-nosylglycol **Literature:** Musachio J.L. et al. Radiosyntheses and reactivities of novel [^{18}F]2-fluoroethyl arylsulfonates. J. Labelled Compd. Radiopharm. 2005, 48, 735-747.	**6179.0100: 100 mg per vial** **6179.1000: 1 g per vial** **Please inquire for customized filling and bulk quantities.** 

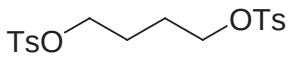
Product Number	Product	Order number / Unit
6180	**1,2-Bis(tosyloxy)ethane** **Precursor for [^{18}F]Fluoroethylcholine** $C_{16}H_{18}O_6S_2$ **Molar Mass:** 370.44 [6315-52-2] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: 1,2-Ethanediol; 1,2-bis(4-methylbenzenesulfonate); 1,2-Ethanediol; 1,2-bis(4-methylbenzenesulfonate) **Synonymes:** Ethylene ditosylate; Ethylene glycol ditosylate; 1,2-Bis(tosyloxy)ethane; 1,2-Bis(4-methylbenzenesulfonyloxy)ethane; 1,2-Bis(p-toluenesulfonyloxy)ethane; 1,2-Bis(p-tolylsulfonyloxy)ethane; 1,2-Bistosyloxy ethane; 1,2-Di(tosyloxy)ethane; 1,2-Ethanediol ditosylate; 1,2-Ethylene ditosylate; Di-O-tosylglycol; Ethylene 1,2-bis(tosylate); Ethylene di-p-toluenesulfonate; Ethylene glycol bis(p-toluenesulfonate); Ethylene glycol di-p-tosylate; Ethylene glycol ditoluenesulfonate; Ethylene glycol ditosylate **Literature:** Hara T. et al. Development of ^{18}F-fluoroethylcholine for cancer imaging with PET: synthesis, biochemistry, and prostate cancer imaging J. Nucl. Med. 2002, 43, 187-199.	**6180.0100: 100 mg per vial** **6180.1000: 1 g per vial** **Please inquire for customized filling and bulk quantities.** 

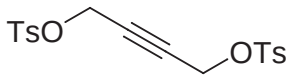
Product Number	Product	Order number / Unit
6181	**2-Bromoethyl nosylate** **Precursor for [^{18}F]BFE (1-Bromo-2-[^{18}F]fluoroethane)** $C_8H_{8Br}NO_5S$ **Molar Mass:** 310.12 [52331-22-3] Colourless to yellowish solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 2-Bromoethyl p-nitrobenzenesulfonate; Benzenesulfonic acid, 4-nitro-, 2-bromoethyl ester **Synonymes:** n/a **Literature:** Kumar P. et al. ^{18}F-FESB: synthesis and automated radiofluorination of a novel ^{18}F-labeled pet tracer for beta-amyloid plaques J. Labelled Compd. Radiopharm. 2005, 482, 983-996.	**6181.0100: 100 mg per vial** **6181.1000: 1 g per vial** **Please inquire for customized filling and bulk quantities.** 

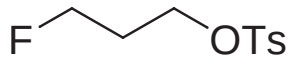
Product Number	Product	Order number / Unit
6182	**2-Bromoethyl triflate** **Precursor for [^{18}F]BFE (1-Bromo-2-[^{18}F]fluoroethane)** $C_3H_{4Br}F_3O_3S$ **Molar Mass:** 257.03 [103935-47-3] Colourless liquid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: Methanesulfonic acid, 1,1,1-trifluoro-, 2-bromoethyl ester; Methanesulfonic acid, trifluoro-, 2-bromoethyl ester **Synonymes:** Trifluoromethanesulfonic acid 2-bromoethyl ester **Literature:** Wang J.-Q. et al. Synthesis and preliminary biological evaluation of O6-[4-(2-[^{18}F]fluoroethoxymethyl)benzyl]guanine as a novel potential PET probe for the DNA repair protein O 6-alkylguanine-DNA alkyltransferase in cancer chemotherapy. Bioorg. Med. Chem. 2005, 13, 5779-5786. Lin K.-S. et al. Synthesis, enantiomeric resolution, F-18 labeling and biodistribution of reboxetine analogs: promising radioligands for imaging the norepinephrine transporter with positron emission tomography. Nucl. Med. Biol. 2005, 32, 415-422. Chi D. Y. et al. A rapid and efficient method for the fluoroalkylation of amines and amides. Development of a method suitable for incorporation of the shortlived positron emitting radionuclide fluorine-18. J. Org. Chem. 1987, 52, 658- 664.	**6182.0100: 100 mg per vial** **6182.1000: 1 g per vial** **Please inquire for customized filling and bulk quantities.** 

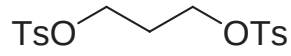
Product Number	Product	Order number / Unit
6183	**2-Bromoethyl tosylate** **Precursor for [^{18}F]BFE (1-Bromo-2-[^{18}F]fluoroethane)** $C_9H_{11Br}O_3S<$ **Molar Mass:** 279.15 [19263-21-9] Colourless to yellowish liquid packaged in dark glass screw cap vials.  **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Ethanol, 2-bromo-, 1-(4-methylbenzenesulfonate) **Synonymes:** Toluene-4-sulfonic acid 2-bromo-ethyl ester; 2-Bromoethyl p-toluenesulfonate **Literature:** Krasikova R.N. et al. Use of 2-[^{18}F]Fluoroethyl Bromide in Synthesis of O-(2´[^{18}F]Fluoroethyl)-L-tyrosine, a Radiotracer for PET Diagnostics of Brain Tumors. Radiochem. 2007, 49, 299-304.	**6183.0100: 100 mg per vial** **6183.1000: 1 g per vial** **Please inquire for customized filling and bulk quantities.**

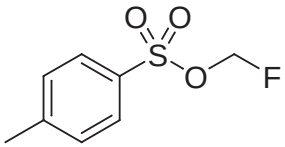
Product Number	Product	Order number / Unit
6184	**2-Fluoroethyl tosylate** **Reference standard for 2-[^{18}F]Fluoroethyl tosylate** $C_9H_{11}FO_3S$ **Molar Mass:** 218.25 [383-50-6] Colourless to pink liquid packaged in dark glass screw cap vials.  **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: Ethanol, 2-fluoro-, 1-(4-methylbenzenesulfonate) **Synonymes:** Ethanol, 2-fluoro-, 4-methylbenzenesulfonate; Ethanol, 2-fluoro-, p-toluenesulfonate; 1-Fluoro-2-(tosyloxy)ethane; 2-Fluoroethyl 4-methylbenzenesulfonate; 2-Fluoroethyl 4-toluenesulfonate; 2-Fluoroethyl p-toluenesulfonate; 4-Methylbenzenesulfonic acid 2-fluoroethyl ester; Fluoro(tosyloxy)ethane; p-Toluenesulfonic acid 2-fluoroethyl ester; Toluene-4-sulfonic acid 2-fluoroethyl ester; 2-Fluoro-1-tosyloxy-ethane **Literature:** Musachio J.L. et al. Radiosyntheses and reactivities of novel [^{18}F]2-fluoroethyl arylsulfonates. J. Labelled Compd. Radiopharm. 2005, 48, 735-747.	**6184.0100: 100 mg per vial** **6184.1000: 1 g per vial** **Please inquire for customized filling and bulk quantities.**

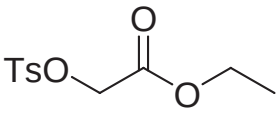
Product Number	Product	Order number / Unit
6185	**Bis(tosyl)-1,4-butanediol** **Precursor for 1-[^{18}F]Fluoro-4-tosyloxy-butane** $C_{18}H_{22}O_6S_2$ **Molar Mass:** 398.50 [4724-56-5] Off-white solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index names: 1,4-Butanediol, bis(4-methylbenzenesulfonate) **Synonymes:** Butan-1,4-diol bis(4-methylbenzenesulfonate); 1,8-bis(toluene-4-sulfonyloxy)-butane; Butane-1,4-diol di-p-toluenesulfonate; 1,4-bis(toluene-4-sulfonyloxy)butane; 1,4-bis(p-toluenesulfonyloxy)butane; Butane-1,4-diyl ditosylate **Literature:** no literature reference available	**6185.0100: 100 mg per vial** **6185.1000: 1 g per vial** **Please inquire for customized filling and bulk quantities.** 

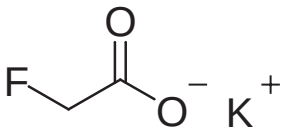
Product Number	Product	Order number / Unit
6186	**1,4-Bis(tosyloxy)but-2-yne** **Precursor for 1-[^{18}F]Fluoro-4-tosyloxy-but-2-yne** $C_{18}H_{18}O_6S_2$ **Molar Mass:** 394.46 [6337-59-3] Brown solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 2-Butyne-1,4-diol, 1,4-bis(4-methylbenzenesulfonate); 2-Butyne-1,4-diol, bis(4-methylbenzenesulfonate); p-Toluenesulfonic acid, 2-butynylene ester **Synonymes:** 1,4-Bis(4-methylphenylsulphonyloxy)but-2-yne; 2-Butyne-1,4-diol ditosylate; 1,4-Butyne diol ditosylate; 1,4-Butynediol ditosylate; 1,4-Di-p-tosyl-2-butyne **Literature:** no literature reference available	**6186.0100: 100 mg per vial** **6186.1000: 1 g per vial** **Please inquire for customized filling and bulk quantities.** 

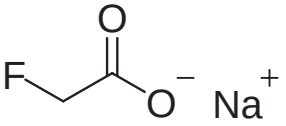
Product Number	Product	Order number / Unit
6190	**3-Fluoropropyltosylate** **Reference standard for 3-[^{18}F]Fluoropropyltosylate** $C_{10}H_{13}FO_3S$ **Molar Mass:** 232.27 [312-68-5] Colourless liquid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: 1-Propanol, 3-fluoro-, 1-(4-methylbenzenesulfonate); 1-Propanol, 3-fluoro-, 4-methylbenzenesulfonate; 1-Propanol, 3-fluoro-, p-toluenesulfonate **Synonymes:** 1-Fluoro-3-tosyloxypropane; 3-Fluoropropyl 4-toluenesulfonate; Toluene-4-sulfonic acid 3-fluoropropyl ester **Literature:** Koivula T. et al. Simplified synthesis of N-(3-[^{18}F]fluoropropyl)-2β-carbomethoxy-3β-(4-fluorophenyl)nortropane ([^{18}F]β-CFT-FP) using [^{18}F]fluoropropyl tosylate as the labelling reagent. J. Labelled Compd. Radiopharm. 2005, 48- 463-471.	**6190.0100: 100 mg per vial** **6190.1000: 1 g per vial** **Please inquire for customized filling and bulk quantities.** 

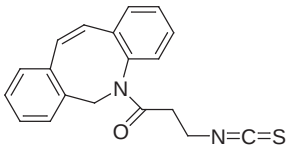
Product Number	Product	Order number / Unit
6191	**1,3-Propane-di-tosylate** **Precursor for 1-[^{18}F]Fluoro-3-tosyloxy-propane** $C_{17}H_{20}O_6S_2$ **Molar Mass:** 384.47 [5469-66-9] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 1,3-Propanediol, 1,3-bis(4-methylbenzenesulfonate) **Synonymes:** 1,3-Propanediol, bis(4-methylbenzenesulfonate); 1,3-Propanediol, di-p-toluenesulfonate; 1,3-(Di-p-tosyl)propane; 1,3-Bis(4-toluenesulfonyloxy)propane; 1,3-Bis(toluenesulfonyloxy)propane: 1,3-Bis(tosyloxy)propane; 1,3-Di(tosyloxy)propane; 1,3-Propanediol di-p-tosylate; 1,3-Propanediol ditosylate; 1,3-Propanediyl di-p-toluenesulfonate; Propane-1,3-diyl di-p-tosylate; Propylene glycol 1,3-ditosylate; Trimethylenebis(p-toluenesulfonate) **Literature:** Halldin C. et al. Preparation of [^{18}F]β-CFT-FP and [^{11}C]β-CFT-FP, selective radioligands for visualisation of the dopamine transporter using positron emission tomography (PET). J. Labelled Compd. Radiopharm. 2000, 43, 1235-1244.	**6191.0100: 100 mg per vial** **6191.1000: 1 g per vial** **Please inquire for customized filling and bulk quantities.** 

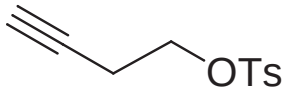
Product Number	Product	Order number / Unit
6194	**Fluoromethyl tosylate** **Reference standard for 1-[^{18}F]Fluoromethyl tosylate** $C_8H_9FO_3S$ **Molar Mass:** 204.22 [114435-86-8] Colourless to brownish liquid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** fluoromethyl 4-methylbenzenesulphonate **Synonymes:** fluoromethyl 4-methylbenzenesulfonate; fluoromethyl tosylate; fluoromethyltosylate; toluene-4-sulfonic acid fluoromethyl ester; fluoromethyl toluene-4-sulfonate **Literature:** Neal T.R. et al. Improved synthesis of [^{18}F]fluoromethyl tosylate, a convenient reagent for radiofluoromethylations. J. Label. Compd. Radiopharm. 2005, 48, 557-568. Iwata R. et al. Radiosynthesis of O-[^{11}C]methyl-L-tyrosine and O-[^{18}F]Fluoromethyl-L-tyrosine as potential PET tracers for imaging amino acid transport. J. Labelled Compd. Radiopharm. 2003, 46, 555-566.	**6194.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

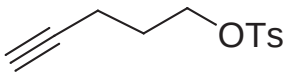
Product Number	Product	Order number / Unit
6200	**Ethyl (p-tosyloxy)acetate** **Precursor for [^{18}F]Fluoroacetate** $C_{11}H_{14}O_5S$ **Molar Mass:** 258.29 [39794-75-7] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: Acetic acid, [[(4-methylphenyl)-sulfonyl]oxy]-, ethyl ester **Synonymes:** Tosylethylglycolate **Literature:** Fujibayashi Y. et al. New approach to fully automated synthesis of sodium [^{18}F]fluoroacetate - a simple and fast method using a commercial synthesizer. Nucl. Med. Biol. 2006, 33, 153-158. Jeong J.M. et al. Synthesis of no-carrier-added [^{18}F]fluoroacetate. J. Labelled Compd. Radiopharm. 1997, 39, 395-399.	**6200.0010: 10 mg per vial** **6200.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
6210	**Potassium fluoroacetate** **Reference standard for [^{18}F]Fluoroacetate** $C_2H_2F_KO_2$ **Molar Mass:** 116.13 [23745-86-0] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H, ^{13}C and ^{19}F NMR spectra **Chemical Name:** CA index name: Acetic acid, fluoro-, potassium salt **Synonymes:** Acetic acid, fluoro-, potassium salt **Literature:** Fujibayashi Y. et al. New approach to fully automated synthesis of sodium [^{18}F]fluoroacetate - a simple and fast method using a commercial synthesizer. Nucl. Med. Biol. 2006, 33, 153-158. Jeong J.M. et al. Synthesis of no-carrier-added [^{18}F]fluoroacetate. J. Labelled Compd. Radiopharm. 1997, 39, 395-399.	**6210.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
6211	**Sodium fluoroacetate** **Reference standard for [^{18}F]Fluoroacetate** $C_2H_2FNaO_2$ **Molar Mass:** 100.03 [62-74-8] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H, ^{13}C and ^{19}F NMR spectra **Chemical Name:** CA index name: Acetic acid, fluoro-, sodium salt **Synonymes:** Sodium monofluoroacetate **Literature:** Fujibayashi Y. et al. New approach to fully automated synthesis of sodium [^{18}F]fluoroacetate - a simple and fast method using a commercial synthesizer. Nucl. Med. Biol. 2006, 33, 153-158. Jeong J.M. et al. Synthesis of no-carrier-added [^{18}F]fluoroacetate. J. Labelled Compd. Radiopharm. 1997, 39, 395-399.	**6211.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
6221	**DBCO-SCN** **Reagent for Copper-free Click Reaction** **Dibenzylcyclooctyne-isothiocyanate** $C_{19}H_{14}N_2OS$ **Molar Mass:** 318.39 CAS-RN not yet assigned Brownish sticky solid **Purity:** > 90% **Certificates:** CoA; MS and ^{1}H NMR **Chemical Name:** N-(3-Isothiocyanato-propionyl)-5,6-dihydro-11,12-didehydrodibenzo[b,f]azocine **Synonymes:** Dibenzylcyclooctyne-isothiocyanate **Literature:** no literature reference available	**Please inquire for customized filling and bulk quantities.** 

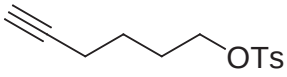
Product Number	Product	Order number / Unit
6301	**1-Tosyloxy-3-butyne** **Precursor for 1-[^{18}F]Fluoro-3-butyne** $C_{11}H_{12}O_3S$ **Molar Mass:** 224.28 [23418-85-1] Colourless to yellowish oil packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 3-Butyn-1-ol, 1-(4-methylbenzenesulfonate); 3-Butyn-1-ol, 4-methylbenzenesulfonate; 3-Butyn-1-ol, p-toluenesulfonate **Synonymes:** 3-Butyn-1-ol tosylate; 3-Butyn-1-yl p-toluenesulfonate; 3-Butyn-1-yl p-tosylate; 3-Butyn-1-yl tosylate; 3-Butynyl 4-methylbenzenesulfonate; 3-Butynyl p-toluenesulfonate; 3-Butynyl tosylate; 4-(Tosyloxy)-1-butyne; 4-Methylbenzenesulfonic acid 3-butynyl ester; 4-p-Tolylsulfonyloxy-1-butyne; Toluene-4-sulfonic acid but-3-ynyl ester; Toluene-4-sulfonic acid but-3-ynyl ester **Literature:** Marik et al. Click for PET: rapid preparation of [^{18}F]fluoropeptides using CuI catalyzed 1,3-dipolar cycloaddition. Tetrahedron Lett. 2006, 47, 6681-6684.	**6301.0010: 10 mg per vial** **6301.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

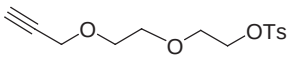
Product Number	Product	Order number / Unit
6302	**1-Tosyloxy-4-pentyne** **Precursor for 1-[^{18}F]Fluoro-4-pentyne** $C_{12}H_{14}O_3S$ **Molar Mass:** 238.30 [77758-50-0] Colourless to yellowish oil packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index names: 4-Pentyn-1-ol, 1-(4-methylbenzenesulfonate); 4-Pentyn-1-ol, 4-methylbenzenesulfonate **Synonymes:** 4-Pentyn-1-ol tosylate; 4-Pentynyl p-toluenesulfonate; 4-Pentynyl tosylate; 5-(p-Toluenesulfonyloxy)pent-1-yne; 5-(Tosyloxy)-1-pentyne; Pent-4-ynyl p-tosylate; Toluene-4-sulfonic acid pent-4-ynyl ester	**6302.0010: 10 mg per vial** **6302.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

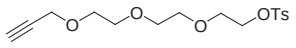
Literature:

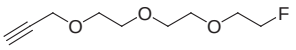
Marik et al. Click for PET: rapid preparation of [^{18}F]fluoropeptides using CuI catalyzed 1,3-dipolar cycloaddition. Tetrahedron Lett. 2006, 47, 6681-6684.

Hausner S.H. et al. In Vivo Positron Emission Tomography (PET) Imaging with an $\alpha_\nu\beta^6$ Specific Peptide Radiolabeled using ^{18}F-Click Chemistry: Evaluation and Comparison with the Corresponding 4-[^{18}F]Fluorobenzoyl- and 2-[^{18}F]Fluoropropionyl-Peptides. J. Med. Chem. 2008, 5901-5904.

Product Number	Product	Order number / Unit
6303	**1-Tosyloxy-5-hexyne** **Precursor for 1-[^{18}F]Fluoro-5-hexyne** $C_{13}H_{16}O_3S$ **Molar Mass:** 252.33 [76911-01-8] Colourless to yellowish oil packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index names: 5-Hexyn-1-ol, 1-(4-methylbenzenesulfonate); 5-Hexyn-1-ol, 4-methylbenzenesulfonate **Synonymes:** 5-Hexyn-1-yl p-toluenesulfonate; 5-Hexyn-1-yl tosylate; 5-Hexynyl 4-methylbenzenesulfonate; 5-Hexynyl tosylate; p-Toluenesulfonic acid 5-hexynyl ester; Toluene-4-sulfonic acid hex-5-ynyl ester **Literature:** Marik et al. Click for PET: rapid preparation of [^{18}F]fluoropeptides using CuI catalyzed 1,3-dipolar cycloaddition. Tetrahedron Lett. 2006, 47, 6681-6684.	**6303.0010: 10 mg per vial** **6303.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
6305	**Tosyl-propargyl-diethylene glycol** **Precursor for [^{18}F]Fluoro-propargyl-diethylene glycol** $C_{14}H_{18}O_5S$ **Molar Mass:** 298.36 [1119249-30-7] Colourless to yellowish oil packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Ethanol, 2-[2-(2-propyn-1-yloxy)ethoxy]-, 1-(4-methylbenzenesulfonate) **Synonymes:** TPDG; Toluene-4-sulfonic acid 2-(2-prop-2-ynyloxy-ethoxy)-ethyl ester **Literature:** Sirion U. et al. An efficient F-18 labeling method for PET study: Huisgen 1,3-dipolar cycloaddition of bioactive substances and F-18-labeled compounds. Tetrahedron Lett. 2007, 48, 3953-3957. Li et al. Click Chemistry for ^{18}F-Labeling of RGD Peptides and microPET Imaging of Tumor Integrin $\alpha_\nu\beta_3$ Expression. Bioconjugate Chem. 2007, 18, 1987-1994.	**6305.0010: 10 mg per vial** **6305.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
6307	**Tosyl-propargyl-triethylene glycol** **Precursor for [^{18}F]Fluoro-propargyl-triethylene glycol** $C_{16}H_{22}O_6S$ **Molar Mass:** 342.41 [888009-94-7] Colourless to yellowish oil packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index names: Ethanol, 2-[2-[2-(2-propyn-1-yloxy)ethoxy]ethoxy]-, 1-(4-methylbenzenesulfonate); Ethanol, 2-[2-[2-(2-propynyloxy)ethoxy]ethoxy]-, 4-methylbenzenesulfonate **Synonymes:** TPTG; Toluene-4-sulfonic acid 2-[2-(2-prop-2-ynyloxy-ethoxy)-ethoxy]-ethyl ester **Literature:** Sirion U. et al. An efficient F-18 labeling method for PET study: Huisgen 1,3-dipolar cycloaddition of bioactive substances and F-18-labeled compounds. Tetrahedron Lett. 2007, 48, 3953-3957. Li et al. Click Chemistry for ^{18}F-Labeling of RGD Peptides and microPET Imaging of Tumor Integrin $\alpha_\nu\beta_3$ Expression. Bioconjugate Chem. 2007, 18, 1987-1994.	**6307.0010: 10 mg per vial** **6307.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

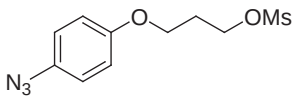
Product Number	Product	Order number / Unit
6308	**Fluoro-propargyl-triethylene glycol** **Reference standard for [^{18}F]Fluoro-propargyl-triethylene glycol** $C_9H_{15}FO_3$ **Molar Mass:** 190.21 [1003005-81-9] ([^{18}F]Fluoro-propargyl-triethylene glycol) Brownish oil packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** 1-Propyne, 3-[2-[2-(2-fluoroethoxy)ethoxy]ethoxy]- **Synonymes:** FPTG, 3-2-[2-(2-Fluoro-ethoxy)-ethoxy]-ethoxy-propyne **Literature:** Li Z.-B. et al. Click Chemistry for ^{18}F-Labeling of RGD Peptides and microPET Imaging of Tumor Integrin $\alpha_\nu\beta_3$ Expression. Bioconjugate Chem. 2007, 18, 1987-1994.	**6308.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
6320	**3-(4-Azidophenoxy)propyl methansulfonate** **Precursor for 1-Azido-4-(3-[^{18}F]fluoro-propoxy)-benzene**	**6320.0010: 10 mg per vial** **6320.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_{10}H_{13}N_3O_4S$ **Molar Mass:** 271.29

[943726-04-3]

Colourless to brownish solid packaged in dark glass screw cap vials.



Purity: > 95 %

Certificates:
CoA; ^{1}H NMR spectrum

Chemical Name:
CA index name: 1-Propanol, 3-(4-azidophenoxy)-, 1-methanesulfonate

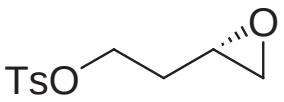
Synonymes:
Methanesulfonic acid 3-(4-azido-phenoxy)-propyl ester

Literature:
Sirion U. et al. An efficient F-18 labeling method for PET study: Huisgen 1,3-dipolar cycloaddition of bioactive substances and F-18-labeled compounds. Tetrahedron Lett. 2007, 48, 3953-3957.

Product Number	Product	Order number / Unit
6351	**(S)-O-Tosyl-1,2-Epoxybutanol**	**Please inquire for customized filling and bulk quantities.**

$C_{11}H_{14}O_4S$ **Molar Mass:** 242.29

[91111-12-5]



Colourless to yellowish solid or semisolid

Purity: > 95 %

Certificates:
CoA; ^{1}H NMR spectrum

Chemical Name:
(2S)-2-(4-Methylbenzenesulfonate)-2-oxiraneethanol,

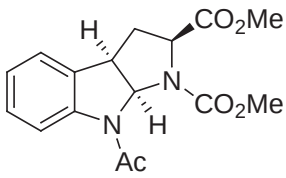
Synonymes:
Oxiraneethanol, 4-methylbenzenesulfonate, (2S)- (9CI);
Oxiraneethanol, 4-methylbenzenesulfonate, (S)-

Literature:
Boekman Jr. R.K. et al. The Development of a Convergent and Efficient Enantioselective Synthesis of the Bengamides via a Common Polyol Intermediate. Helvetica Chimica Acta 2002, 85, 4532.

Product Number	Product	Order number / Unit
6500	**Dimethyl-8-acetyl-hexahydropyrrolo[2,3]indol-1,2-dicarboxylate** **Precursor for α-[^{11}C]Methyl-L-tryptophan**	**6500.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_{16}H_{18}N_2O_5$ **Molar Mass:** 318.32

[79465-83-1]



Colourless crystals packaged in dark glass screw cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H NMR spectrum

Chemical Name:
CA index name: Pyrrolo[2,3-b]indole-1,2(2H)-dicarboxylic acid, 8-acetyl-3,3a,8,8a-tetrahydro-, dimethyl ester, (2α,3a beta,8a beta)-

Synonymes:
Dimethyl-(2S, 3aR, 8aS)-8-acetyl-1,2,3,3a,8a-hexahydropyrrolo[2,3]indol-1,2-dicarboxylate

Literature:
Shoaf S. et al. The suitability of [^{11}C]-α-methyl-L-tryptophan as a tracer for serotonin synthesis: studies with dual administration of [^{11}C]- and [^{14}C]-labeled tracer. J. Cereb. Blood Flow Metab. 2000, 20, 244-252.

Shoaf S. et al. Brain serotonin synthesis rates in rhesus monkeys determined by [^{11}C]-α-methyl-L-tryptophan and positron emission tomography compared to CSF 5-hydroxyindole-3-acetic acid concentrations. Neuropsychopharmacology 1998, 19, 354-353.

Chakraborty P.K. et al. A high-yield and simplified procedure for the synthesis of α-[^{11}C]methyl-L-tryptophan. Nucl. Med. Biol. 1996, 23, 1005-1008.

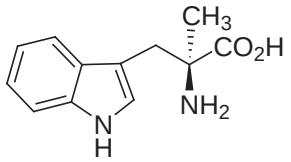
Mzengeza S. et al. Asymmetric radiosynthesis of α-[^{11}C]methyl-L-tryptophan for PET studies. Nucl. Med. Biol. 1995, 22, 303-307.

Product Number	Product	Order number / Unit
6510	**α-Methyl-L-tryptophan** **Reference standard for α-[^{11}C]Methyl-L-tryptophan**	**6510.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_{12}H_{14}N_2O_2$ **Molar Mass:** 218.25

[16709-25-4]

Colourless solid packaged in dark glass screw cap vials.



Purity: > 95 %

Certificates:
CoA; ^{1}H NMR spectrum

Chemical Name:
CA index name: L-Tryptophan, α-methyl-

Synonymes:
n/a

Literature:

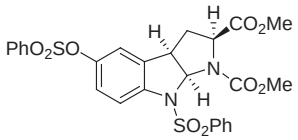
Shoaf S. et al. The suitability of [^{11}C]-α-methyl-L-tryptophan as a tracer for serotonin synthesis: studies with dual administration of [^{11}C]- and [^{14}C]-labeled tracer. J. Cereb. Blood Flow Metab. 2000, 20, 244-252.

Shoaf S. et al. Brain serotonin synthesis rates in rhesus monkeys determined by [^{11}C]-α-methyl-L-tryptophan and positron emission tomography compared to CSF 5-hydroxyindole-3-acetic acid concentrations. Neuropsychopharmacology 1998, 19, 354-353.

Chakraborty P.K. et al. A high-yield and simplified procedure for the synthesis of α-[^{11}C]methyl-L-tryptophan. Nucl. Med. Biol. 1996, 23, 1005-1008.

Mzengeza S. et al. Asymmetric radiosynthesis of α-[^{11}C]methyl-L-tryptophan for PET studies. Nucl. Med. Biol. 1995, 22, 303-307.

Product Number	Product	Order number / Unit
6520	**Dimethyl-8-phenylsulfonyl-5-phenylsulfonyloxy-hexahydropyrrolo[2,3]indol-1,2-dicarboxylate** **Precursor for 5-OH-α-[^{11}C]Methyl-L-tryptophan**	**6520.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**



$C_{26}H_{24}N_2O_9S_2$ **Molar Mass:** 572.61

[150804-39-0]

Colourless solid packaged in dark glass screw cap vials.

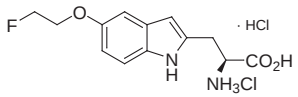
Purity: > 95 %

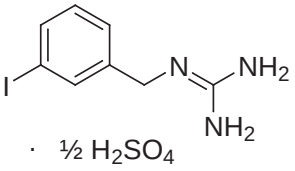
Certificates:
CoA; ^{1}H NMR spectrum

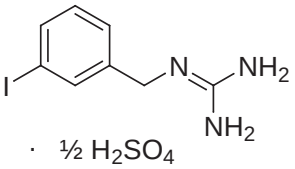
Chemical Name:
CA index name: Pyrrolo[2,3-b]indole-1,2(2H)-dicarboxylic acid, 3,3a,8,8a-tetrahydro-8-(phenylsulfonyl)-5-[(phenylsulfonyl)oxy]-, dimethyl ester, [2S-(2α,3a beta,8a beta)]-

Synonymes:
Dimethyl-(2S, 3aR, 8aS)-8-phenylsulfonyl-5-phenylsulfonyloxy-1,2,3,3a,8a-hexahydropyrrolo[2,3]indol-1,2-dicarboxylate

Literature:
Crich D. et al. Asymmetric synthesis of α-substituted 5-hydroxytryptophan derivatives. Heterocycles 1993, 36, 1199-1204.

Product Number	Product	Order number / Unit
6532	**5-FEHTP hydrochloride** **Reference standard for 5-[^{18}F]FEHTP (L-5-(2-[^{18}F]fluoroethoxy)tryptophan hydrochloride)** $C_{13}H_{16}ClFN_2O_3$ **Molar Mass:** 302.73 [1215091-03-4] (free base) Colourless to off-white solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: L-5-(2-fluoroethoxy)tryptophan hydrochloride **Synonymes:** 5-[^{18}F]FEHTP standard **Literature:** Li R. et al. Synthesis and evaluation of L-5-(2-[^{18}F]fluoroethoxy)tryptophan as a new PET tracer. Appl. Radiat. Isot. 2010, 68, 303-308.	**Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
7000	**MIBG Hemisulfate** **Precursor for [*I]Metaiodobenzylguanidine** $C_8H_{10}IN_3 \cdot {}^1/_2\ H_2SO_4$ **Molar Mass:** 324.13 [87862-25-7] [80663-95-2] (free base) White to off-white solid packaged in dark glass crimp cap vials (7000.0002 and 7000.0005) or screw cap vials (7000.0025, 7000.0050, 7000.0100, and 7000.1000) **Purity:** > 99 % (HPLC) **Certificates:** CoA; ^{1}H NMR spectrum; HPLC **Chemical Name:** CA index name: Guanidine, [(3-iodophenyl)methyl]-, sulfate (2:1) **Synonymes:** (3-Iodobenzyl)guanidine hemisulfate; meta-Iodobenzylguanidine hemisulfate; Iobenguane sulfate **Literature:** Wieland D.M. et al. Imaging the primate adrenal medulla with [^{123}I] and [^{131}I]metaiodobenzylguanidine: concise communication. J. Nucl. Med. 1981, 22, 358-364. Shapiro B. et al. Iodine-131 Metaiodobenzylguanidine for the locating of suspected pheochromocytoma; experience on 400 cases. J. Nucl. Med. 1985, 26, 576-585. Moll V.O.N. et al. Iodine-131 MIBG scintigraphy of neuroend-ocrine tumors other than pheocharomycotoma and neuroblasterna. J. Nucl. Med. 1987, 28, 979-988.	**7000.0002: 2 mg per vial** **7000.0005: 5 mg per vial** **7000.0025: 25 mg per vial** **7000.0050: 50 mg per vial** **7000.0100: 100 mg per vial** **7000.1000: 1 g per vial** **Please inquire for customized filling and bulk quantities.** 

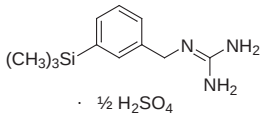
Product Number	Product	Order number / Unit
7001	**MIBG Hemisulfate (GMP)** **Precursor for [*I]Metaiodobenzylguanidine** Manufactured according to GMP requirements for APIs (ICH Q7) U.S. Drug Master File (DMF) available. $C_8H_{10}IN_3 \cdot {}^1/_2\ H_2SO_4$ **Molar Mass:** 324.13 [87862-25-7] White to nearly white solid packaged in dark glass screw cap vials. **Purity:** > 99 % (HPLC) **Certificates:** CoA with ^{1}H NMR and IR spectra, melting point (identity), HPLC (purity), GC (residual solvents), Assay (HPLC) **Chemical Name:** CA index name: Guanidine, [(3-iodophenyl)methyl]-, sulfate (2:1) **Synonymes:** (3-Iodobenzyl)guanidine hemisulfate; meta-Iodobenzylguanidine hemisulfate; Iobenguane sulfate **Literature:** Same as product number 7000.	**7001.0010: 10 mg per vial** **7001.0100: 100 mg per vial** **7001.1000: 1 g per vial** **Please inquire for customized filling and bulk quantities.**  · ½ H_2SO_4

Product Number	Product	Order number / Unit
7010	**MTMSBG** **Precursor for n.c.a. [*I]Metaiodobenzylguanidine**	**7010.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_{11}H_{19}N_3Si \cdot {}^1/_2\ H_2SO_4$ **Molar Mass:** 270.41

[143773-92-6] (free base)

Colourless to off-white solid packaged in dark glass screw cap vials.



Purity: > 95 %

Certificates:
CoA; ^{1}H NMR spectrum

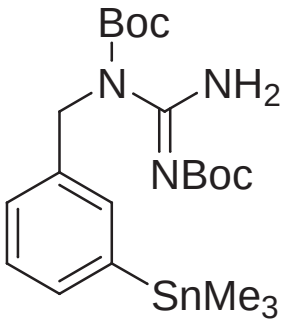
Chemical Name:
Guanidine, [[3-(trimethylsilyl)phenyl]methyl]-, sulfate (2:1)

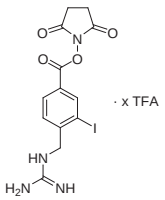
Synonymes:
(3-Trimethylsilylbenzyl)guanidine hemisulfate;
meta-Trimethylsilylbenzylguanidine hemisulfate;
2-[(3-trimethylsilylphenyl)methyl]guanidine hemisulfate; MTMSBG hemisulfate

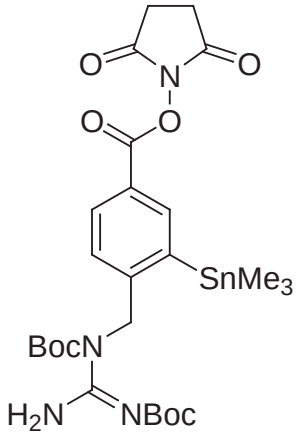
Literature:

Vaidyanathan G. et al. No-carrier added Synthesis of meta-[^{131}I]iodobenzylguanidine. Appl. Radiat. Isot. 1993, 44(3), 621-628.

Knickmeier M. et al. Clinical evaluation of no-carrier-added meta-[^{123}I]iodobenzylguanidine for myocardical scintigraphy. Eur. J. Nucl. Med. 2000, 27, 302-307.

Product Number	Product	Order number / Unit
7012	**TMSnBG** **Precursor for n.c.a. [*I]Metaiodobenzylguanidine** $C_{21}H_{35}N_3O_4Sn$ **Molar Mass:** 512.23 [1000875-21-7] colourless to yellowish oil or solid packaged in dark glass screw cap vials. **Purity:** **Certificates:** CoA; ^{1}H and ^{119}Sn NMR spectra **Chemical Name:** N,N'-Bis(tert-butoxycarbonyl)-N-(3-trimethylstannylbenzyl)guanidine **Synonymes:** TMSnBG **Literature:** Hammerschmidt F. et al Improved Synthesis of No-Carrier-Added [*I]MIBG and Its Precursors. Synthesis 2012, 44, 3387-3391.	**7012.0010: t10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

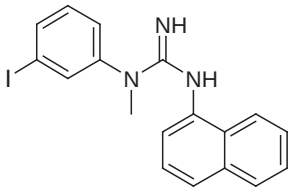
Product Number	Product	Order number / Unit
7014	**SGMIB Standard** **Standard for [^{131}I]SGMIB** **N-succinimidyl 4-guanidinomethyl-3-[^{131}I]iodobenzoate** $C_{13}H_{13}IN_4O_4$ (Free base) **Molar Mass:** 416.17 (free base) [344791-53-3] (free base) Colourless to off-white solid packaged in dark glass screw cap vials. **Purity:** > 80 % **Certificates:** CoA; ^{1}H NMR spectrum; HPLC **Chemical Name:** N-Succinimidyl 4-Guanidinomethyl-3-iodobenzoate TFA salt **Synonymes:** Guanidine TFA salt, [[4-[[(2,5-dioxo-1-pyrrolidinyl)oxy]carbonyl]-2-iodophenyl]methyl]-; 4-Guanidinomethyl-3-iodo-benzoic acid 2,5-dioxo-pyrrolidin-1-yl ester TFA salt; Benzoic acid, 4-[[(aminoiminomethyl)amino]methyl]-3-iodo-, 2,5-dioxo-1-pyrrolidinyl ester TFA salt; SGMIB Standard **Literature:** Vaidyanathan G. et al. A Polar Substituent-Containing Acylation Agent for the Radioiodination of Internalizing Monoclonal Antibodies: N-Succinimidyl 4-Guanidinomethyl-3-[^{131}I]iodobenzoate ([^{131}I]SGMIB). Bioconjugate Chem. 2001, 12 ,428-438. Vaidyanathan G. et al. Synthesis of N-succinimidyl 4-guanidinomethyl-3-[*I]iodobenzoate: a radio-iodination agent for labeling internalizing proteins and peptides. Nature Protocols 2007, 2, 282-286.	**7014.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
7015	**SGMIB Precursor** **Precursor for [^{131}I]SGMIB** **N-succinimidyl 4-guanidinomethyl-3-[^{131}I]iodobenzoate** $C_{26}H_{38}N_4O_8Sn$ **Molar Mass:** 653.31 [344791-59-9] Colourless to off-white solid/foam packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Carbamic acid, [[[(1,1-dimethylethoxy)carbonyl]amino]iminomethyl][[4-[[(2,5-dioxo-1-pyrrolidinyl)oxy]carbonyl]-2-(trimethylstannyl)phenyl]methyl]-, 1,1-dimethylethyl ester **Synonymes:** N-Succinimidyl 4-[N1,N2-Bis(tert-butyloxycarbonyl)guanidinomethyl]-3-(trimethylstannyl)benzoate; Benzoic acid, 4-[[[(1,1-dimethylethoxy)carbonyl][[[(1,1-dimethylethoxy)carbonyl]amino]iminomethyl]amino]methyl]-3-(trimethylstannyl)-, 2,5-dioxo-1-pyrrolidinyl ester; SGMIB Precursor	**7015.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Vaidyanathan G. et al. A Polar Substituent-Containing Acylation Agent for the Radioiodination of Internalizing Monoclonal Antibodies: N-Succinimidyl 4-Guanidinomethyl-3-[^{131}I]iodobenzoate ([^{131}I]SGMIB). Bioconjugate Chem. 2001, 12 ,428-438.

Vaidyanathan G. et al. Synthesis of N-succinimidyl 4-guanidinomethyl-3-[*I]iodobenzoate: a radio-iodination agent for labeling internalizing proteins and peptides. Nature Protocols 2007, 2, 282-286.

Product Number	Product	Order number / Unit
7020	**CNS 1261** **Reference standard for [*I]CNS 1261** $C_{18}H_{16}IN_3$ **Molar Mass:** 401.24 [341032-67-5] Colourless to slightly colored oil packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: Guanidine, N-(3-iodophenyl)-N-methyl-N´-1-naphthalenyl- **Synonymes:** N-1-Naphthyl-N´-3-iodophenyl-N´-methylguanidine	**7020.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Erlandsson K. et al. Kinetic modeling of [^{123}I]CNS 1261-a potential SPECT tracer for the NMDA receptor. Nucl. Med. Biol. 2003, 30, 441-454.

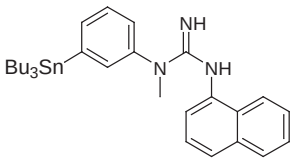
Owens J. et al. Synthesis and binding characteristics of N-(1-naphthyl)-N´-(3-[125I]iodophenyl)-N´-methylguanidine ([125I]-CNS 1261): A potential SPECT agent for imaging NMDA receptor activation. Nucl. Med. Biol. 2000, 27, 557-564.

Product Number	Product	Order number / Unit
7030	**TBS-CNS 1261** **Precursor for [*I]CNS 1261**	**7030.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_{30}H_{43}N_3Sn$ **Molar Mass:** 564.39

[765890-24-2]

Colourless to slightly colored oil packaged in dark glass crimp cap vials.



Purity: > 95 %

Certificates:
CoA; ^{1}H and ^{119}Sn NMR spectra

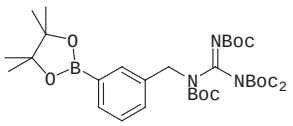
Chemical Name:
CA index name: Guanidine,
N-methyl-N´-1-naphthalenyl-N-[3-(tributylstannyl)phenyl]-

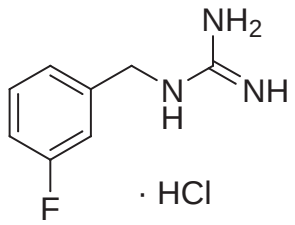
Synonymes:
N-(1-Naphthyl)-N´-[3-(tributylstannyl)phenyl-N´-methylguanidine

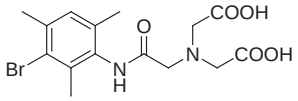
Literature:

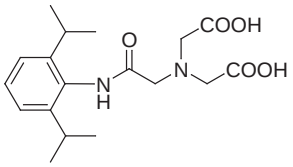
Erlandsson K. et al. Kinetic modeling of [^{123}I]CNS 1261-a potential SPECT tracer for the NMDA receptor. Nucl. Med. Biol. 2003, 30, 441-454.

Owens J. et al. Synthesis and binding characteristics of N-(1-naphthyl)-N´-(3-[125I]iodophenyl)-N´-methylguanidine ([125I]-CNS 1261): A potential SPECT agent for imaging NMDA receptor activation. Nucl. Med. Biol. 2000, 27, 557-564.

Product Number	Product	Order number / Unit
7033	**MFBG pinacol boronate precursor** **Precursor for meta-[^{18}F]Fluorobenzylguanidine** $C_{34}H_{54}BN_3O_{10}$ **Molar Mass:** 675.62 CAS-RN not yet assigned Colourless to off-white solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** tert-Butyl-N-[(1Z)-bis[(tert-butoxy)carbonyl]amino([(tert-butoxy)carbonyl]([3-(tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl]methyl)amino)methylidene]carbamate **Synonymes:** [^{18}F]MFBG pinacol boronate precursor **Literature:** Garg P.K. et al. Synthesis and Preliminary Evaluation of para- and meta-[^{18}F]Fluorobenzylguanidine. Nucl. Med. Biol. 1994, 21, 97-103. Preshlock S. Enhanced Copper-Mediated ^{18}F-Fluorination of Aryl Boronic Esters provides Eight Radiotracers for PET Applications. Chem. Commun. 2016, 52, 8361-8364.	**7033.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
7034	**MFBG hydrochloride** **Precursor for meta-[^{18}F]Fluorobenzylguanidine** $C_8H_{11}ClFN_3$ **Molar Mass:** 203.64 [1246547-53-4] Colourless to off-white solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: Guanidine, N-[(3-fluorophenyl)methyl]-, hydrochloride (1:1) **Synonymes:** [^{18}F]MFBG standard **Literature:** Garg P.K. et al. Synthesis and Preliminary Evaluation of para- and meta-[^{18}F]Fluorobenzylguanidine. Nucl. Med. Biol. 1994, 21, 97-103.	**Please inquire for customized filling and bulk quantities.** 

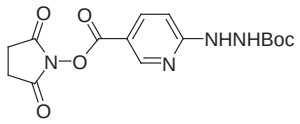
Product Number	Product	Order number / Unit
7050	**Mebrofenin** **Ligand for labelling with ^{99m}Tc** $C_{15}H_{19Br}N_2O_5$ **Molar Mass:** 387.23 [78266-06-5] Colourless or brownish crystals packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Glycine, N-[2-[(3-bromo-2,4,6-trimethylphenyl)-amino]-2-oxoethyl]-N-(carboxymethyl)- **Synonymes:** N-[2-[(3-bromo-2,4,6-trimethylphenyl)-amino]-2-oxoethyl]-N-(carboxymethyl)-glycine; SQ26962 **Literature:** Jovanovic M.S. et al. Correlation between lipophilicity of the ligands and the hepatobiliary properties of the radiopharmaceuticals: approach to the development of new IDA derivatives. J. Radioanal. Nucl. Chem. 2000, 245, 555-560. Daniel G.B. et al. Hepatic extraction efficiency of technetium-99m-mebrofenin in the dog with toxic-induced acute liver disease. J. Nucl. Med. 1998, 39, 1286-1292.	**7050.0100: 100 mg per vial** **7050.1000: 1 g per vial** **Please inquire for customized filling and bulk quantities.** 

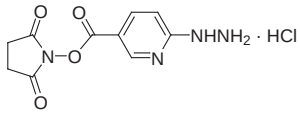
Product Number	Product	Order number / Unit
7060	**Disofenin** **Ligand for labelling with ^{99m}Tc** $C_{18}H_{26}N_2O_5$ **Molar Mass:** 350.41 [65717-97-7] Colourless crystals packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Glycine, N-[2-[[2,6-bis(1-methylethyl)phenyl]amino]-2-oxoethyl]-N-(carboxymethyl)- **Synonymes:** DISIDA, N-[[(2,6-Diisopropylphenyl)carbamoyl]methyl]iminodiacetic acid	**7060.0100: 100 mg per vial** **7060.1000: 1 g per vial** **Please inquire for customized filling and bulk quantities.** 

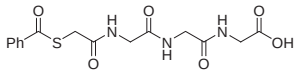
Literature:

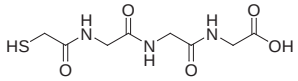
Jovanovic M.S. et al. Correlation between lipophilicity of the ligands and the hepatobiliary properties of the radiopharmaceuticals: approach to the development of new IDA derivatives. J. Radioanal. Nucl. Chem. 2000, 245, 555-560.

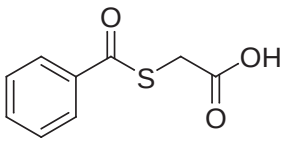
Van der Walt T.N. et al. Indirect spectrophotometric determination of N-[4-(n-butyl)acetanilide)iminodiacetic acid (BIDA), N-(2,6-diisopropylacetanilide)iminodiacetic acid (DISIDA), diethylene-triaminepentaacetic acid (DTPA) and methylenediphosphonic acid (MDP) in labeled compounds. Appl. Radiat. Isot. 1989, 40, 525-529.

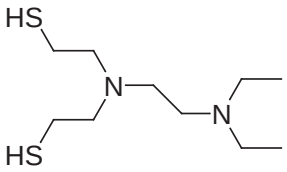
Product Number	Product	Order number / Unit
7080	**Succinimidyl-N-Boc-Hynic** **Ligand for labelling with ^{99m}Tc** $C_{15}H_{18}N_4O_6$ **Molar Mass:** 350.33 [133081-26-2] Colourless crystals packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Hydrazinecarboxylic acid, 2-[5-[[(2,5-dioxo-1-pyrrolidinyl)oxy]carbonyl]-2-pyridinyl]-, 1,1-dimethylethyl ester **Synonymes:** 6-Boc-hydrazinopyridine-3-NHS; N´-5-[2-(2,5-Dioxo-pyrrolidin-1-yloxy)-acetyl]-pyridin-2-yl-hydrazinecarboxylic acid tert-butyl ester **Literature:** Abrams M.J. et al. Technetium-99-m-Human Polyclonal IgG radiolabeled via the hydrazino nicotinamide derivative for imaging focal sites of infection in rats. J. Nucl. Med. 1990, 31, 2022-2028. Decristoforo C. et al. ^{99m}Tc-HYNIC-[Tyr^3]-octreotide for imaging somatostatin-receptor-positive tumors: preclinical evaluation and comparison with ^{111}In-octreotide. J. Nucl. Med. 2000, 41, 1114-1119.	**7080.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

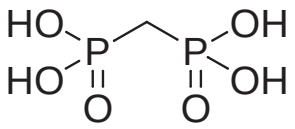
Product Number	Product	Order number / Unit
7090	**Succinimidyl-Hynic hydrochloride** **Ligand for labelling with ^{99m}Tc** $C_{10}H_{10}N_4O_4 \cdot HCl$ **Molar Mass:** 286.67 [133081-27-3] [167639-20-5] (free base) Colourless to slightly grey solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 2,5-Pyrrolidinedione, 1-[[(6-hydrazino-3-pyridinyl)carbonyl]oxy]-, monohydrochloride **Synonymes:** OSU-Hynic; Succinimidyl-Hynic; Succinimidyl hydrazinium nicotinate hydrochloride **Literature:** Abrams M.J. et al. Technetium-99-m-Human Polyclonal IgG radiolabeled via the hydrazino nicotinamide derivative for imaging focal sites of infection in rats. J. Nucl. Med. 1990, 31, 2022-2028. Decristoforo C. et al. ^{99m}Tc-HYNIC-[Tyr^3]-octreotide for imaging somatostatin-receptor-positive tumors: preclinical evaluation and comparison with ^{111}In-octreotide. J. Nucl. Med. 2000, 41, 1114-1119.	**7090.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

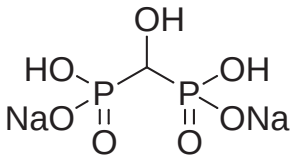
Product Number	Product	Order number / Unit
7100	**S-Benzoyl-MAG-3** **Ligand for labelling with ^{99m}Tc** $C_{15}H_{17}N_3O_6S$ **Molar Mass:** 367.38 [103725-47-9] Colourless crystals packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Glycine, N-[(benzoylthio)acetyl]glycylglycyl- **Synonymes:** Glycine, N-[N-[N-[(benzoylthio)acetyl]glycyl]glycyl]; Betiatide; N-(S-Benzoylmercapto)acetylglycylglycylglycine; S-Benzoylmercaptoacetyltriglycine; MP 600; BzSAc-Gly-Gly-Gly-OH **Literature:** Bormans G. et al. Investigation of the labeling characteristics of ^{99m}Tc- mercaptoacetyltriglycine. Nucl. Med. Biol. 1995, 22, 339-349. Noll B. et al. Preparation of the renal function and imaging agent technetium-99m-MAG3 starting from S-unprotected mercaptoacetyltriglycine. Appl. Radiat. Isot. 1992, 43, 899-901.	**7100.0100: 100 mg per vial** **7100.1000: 1 g per vial** **Please inquire for customized filling and bulk quantities.** 

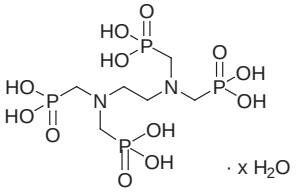
Product Number	Product	Order number / Unit
7110	**MAG 3** **Ligand for labelling with ^{99m}Tc** $C_8H_{13}N_3O_5S$ **Molar Mass:** 263.27 [66516-09-4] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index names: Glycine, N-(mercaptoacetyl)glycylglycyl-; Glycine, N-[N-[N-(mercaptoacetyl)glycyl]glycyl]- **Synonymes:** Mercaptoacetylglycylglycylglycine; Mercaptoacetyltriglycine; Mertiatide **Literature:** Bormans G. et al. Investigation of the labeling characteristics of ^{99m}Tc- mercaptoacetyltriglycine. Nucl. Med. Biol. 1995, 22, 339-349. Noll B. et al. Preparation of the renal function and imaging agent technetium-99m-MAG3 starting from S-unprotected mercaptoacetyltriglycine. Appl. Radiat. Isot. 1992, 43, 899-901.	**7110.0010: 10 mg per vial** **7110.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
7111	**(Benzoylmercapto)acetic acid** $C_9H_8O_3S$ **Molar Mass:** 196.22 [6398-74-9] Colourless crystals packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Acetic acid, 2-(benzoylthio)- **Synonymes:** Acetic acid, (benzoylthio)-; Acetic acid, mercapto-, benzoate; Benzoic acid, thio-, S-ester with mercaptoacetic acid; 2-(Benzoylmercapto)ethanoic acid; 2-(Benzoylthio)acetic acid; Benzoylthioglycolic acid; S-(Benzoylmercapto)acetic acid; S-Benzoylthioglycolic acid **Literature:** Park S. H. et al. Synthesis and biological characterization of ^{99m}Tc(I) tricarbonyl cysteine complex, a potential diagnostic for assessment of renal function. J. Labelled Compd. Radiopharm. 2005, 48, 63-74.	**7111.0001: 1 mg per vial** **7111.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

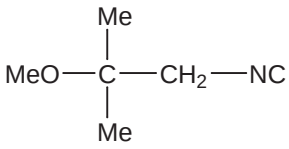
Product Number	Product	Order number / Unit
7150	**BMEDA** **Ligand for labelling with ^{99m}Tc** $C_{10}H_{24}N_2S_2$ **Molar Mass:** 236.44 [93798-62-0] Colourless to yellowish liquid packaged in dark glass crimp cap vials. **Purity:** > 90 % **Certificates:** CoA; ^{1}H NMR spectrum; GC **Chemical Name:** CA index name: Ethanethiol, 2,2´-[[2-(diethylamino)ethyl]imino]bis- **Synonymes:** N,N-Bis(2-mercaptoethyl)-N´,N´-diethylethylenediamine **Literature:** Bao A. et al. Direct ^{99m}Tc labelling of pegylated liposomal doxorubicin (doxil) for pharmacokinetic and non-invasive imaging studies. J. Pharmacol. Exp. Ther. 2004, 308, 419 -25. Leon A. et al. Novel mixed ligand technetium complexes as 5-HT1A receptor imaging agents. Nucl. Med. Biol. 2002, 29, 217-26.	**7150.0010: 10 mg per vial** **7150.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
7160	**MDP** **Ligand for labelling with ^{99m}Tc** $CH_6O_6P_2$ **Molar Mass:** 176.00 [1984-15-2] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{31}P NMR spectra **Chemical Name:** CA index name: Phosphonic acid, methylenebis **Synonymes:** Phosphonic acid, methylenedi-; Medronic acid; Methanebisphosphonic acid; Methanediphosphonic acid; Methylene-1,1-bisphosphonic acid; Methylenebis[phosphonic acid]; Methylenediphosphonic acid; Methylene diphosphonate **Literature:** Subramanian G. et al. Technetium-99m-methylene diphosphonate - a superior agent for skeletal imaging: comparison with other technetium complexes. J. Nucl. Med. 1975, 16, 744-755. Blake G.M. et al. Quantitative Studies of Bone in Postmenopausal Women Using ^{18}F-Fluoride and ^{99m}Tc-Methylene Diphosphonate J. Nucl. Med. 2002, 43, 338-345. Moore A.E.B. et al. Validation of Ultrafiltration as a Method of Measuring Free ^{99m}Tc-MDP. J. Nucl. Med. 2003, 44, 891-897. Moore A.E.B. et al. Validation of a Blood-Sampling Method for the Measurement of ^{99m}Tc-Methylene Diphosphonate Skeletal Plasma Clearance. J. Nucl. Med. 2006, 47, 581-586.	**7160.1000: 1 g per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
7161	**HMDP** **Ligand for labelling with ^{99m}Tc** $CH_4Na_2O_7P_2$ **Molar Mass:** 235.97 [14255-61-9] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{31}P NMR spectra **Chemical Name:** CA index name: Phosphonic acid, (hydroxymethylene)bis-, disodium salt; Phosphonic acid, (hydroxymethylene)di-, disodium salt **Synonymes:** Disodium (hydroxymethylene)diphosphonate; Disodium methane-1-hydroxy-1,1-diphosphonate; Methanehydroxydiphosphonic acid disodium salt; Oxidronate sodium; Oxidronic acid sodium salt; Sodium oxidronate **Literature:** Wang T.S.T. et al. Bone-Seeking Properties of Tc-99m Carbonyl Diphosphonic Acid, Dihydroxy Methylene Diphosphonic Acid and Monohydroxy-Methylene PhosphonicAcid: Concise Communication. J. Nucl. Med. 1980, 21, 767-770.	**7161.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
7165	**EDTMP** **Ligand for radiolabelling** $C_6H_{20}N_2O_{12}P_4 \cdot xH_2O$ **Molar Mass:** 436.12 [1429-50-1] White to off-white powder packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Phosphonic acid, P,P´,P´´,P´´´-[1,2-ethanediylbis[nitrilobis(methylene)]]tetrakis- **Synonymes:** Phosphonic acid, [1,2-ethanediylbis[nitrilobis(methylene)]]tetrakis-; Phosphonic acid, [ethylenebis(nitrilodimethylene)]tetra-; Briquest 422-25S; Chelating agent 540; Chelest PH 540; Cublen 115; Dequest 2040; Dequest 2041; Editempa; EDPA; EDPA (chelating agent); EDTF; EDTMPA; EDTPA; EDTPH; Ethylenedi(nitrilodimethylene)tetraphosphonic acid; Ethylenediamine-N,N,N´,N´-tetra(methylphosphonic acid); Ethylenediamine-N,N,N´,N´-tetrakis(methylenephosphonic acid); Ethylenediaminetetra(methylenephosphonic acid); Ethylenediaminetetrakis(methylenephosphonic acid); Ethylenediaminetetrakis(methylphosphonic acid); Ethylenediaminetetramethylenephosphonate; Ethylenediaminotetra(methylenephosphonic acid); N,N,N´,N´-Tetrakis(phosphonomethyl)ethylenediamine **Literature:** no literature reference available	**Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
7200	**MIBI** **Ligand for labelling with ^{99m}Tc or ^{188}Re**	**7200.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.**



Caution, stench!

$C_6H_{11}NO$ **Molar Mass:** 113.16

[109434-22-2]

Colourless oil packaged in dark glass crimp cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H and ^{13}C NMR spectra

Chemical Name:
CA index name: Propane, 1-isocyano-2-methoxy-2-methyl-

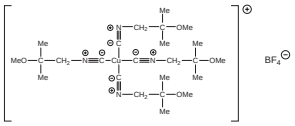
Synonymes:
2-Methoxyisobutyl isonitrile; 2-Methoxyisobutyl isocyanide

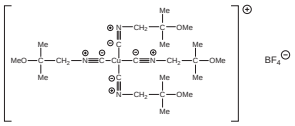
Literature:

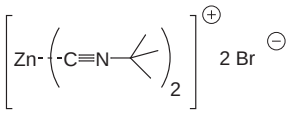
Taki J. et al. Assessment of P-glycoprotein in patients with malignant bone and soft-tissue tumors using technetium-99m-MIBI scintigraphy. J. Nucl. Med. 1998, 39, 1179-1184.

Kostakoglu L. et al. P-glycoprotein expression by technetium-99m-MIBI scintigraphy in hematologic malignancy. J. Nucl. Med. 1998, 39, 1191-1197.

Lee T.-W. et al. Synthesis, reactivity and ^{99m}Tc labeling of 2-alkoxyisobutylisonitrile. Appl. Radiat. Isot. 1996, 47, 207-210.

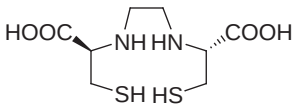
Product Number	Product	Order number / Unit
7210	**Copper tetraMIBI tetrafluoroborate [Cu(MIBI)$_4$]BF$_4$** **Ligand for labelling with ^{99m}Tc or ^{188}Re** $C_{24}H_{44}CuN_4O_4 \cdot BF_4$ **Molar Mass:** 602.98 [103694-84-4] Colourless to white crystalline solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H, ^{13}C and ^{19}F NMR spectra **Chemical Name:** CA index name: Copper(1+), tetrakis[1-(isocyano-kappaC)-2-methoxy-2-methylpropane]-, (T-4)-, tetrafluoroborate(1-) **Synonymes:** Tetrakis (2-methoxy isobutyl isonitrile) Copper (I) tetrafluoroborate; Propane, 1-isocyano-2-methoxy-2-methyl-, copper complex; Cardio-Spect; [Cu(MIBI)4]BF4; Copper tetraMIBI tetrafluoroborate; CuMibi; Copper MIBI; Cu MIBI **Literature:** Taki J. et al. Assessment of P-glycoprotein in patients with malignant bone and soft-tissue tumors using technetium-99m-MIBI scintigraphy. J. Nucl. Med. 1998, 39, 1179-1184. Kostakoglu L. et al. P-glycoprotein expression by technetium-99m-MIBI scintigraphy in hematologic malignancy. J. Nucl. Med. 1998, 39, 1191-1197. Lee T.-W. et al. Synthesis, reactivity and ^{99m}Tc labeling of 2-alkoxyisobutylisonitrile. Appl. Radiat. Isot. 1996, 47, 207-210.	**7210.0100: 100 mg per vial** **7210.1000: 1 g per vial** **Please inquire for customized filling and bulk quantities.** 

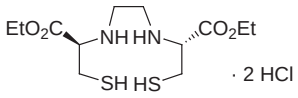
Product Number	Product	Order number / Unit
7211	**Copper tetraMIBI tetrafluoroborate (GMP)** **Ligand for labelling with ^{99m}Tc or ^{188}Re** Manufactured according to GMP requirements for APIs (ICH Q7) European Drug Master File (ASMF) available. $C_{24}H_{44}CuN_4O_4 \cdot BF_4$ **Molar Mass:** 602.98 [103694-84-4] Colourless to white crystalline solid packaged in dark glass screw cap vials. **Purity:** > 99 % **Certificates:** CoA with ^{1}H, ^{13}C, ^{19}F NMR, and IR spectra and melting point (identity); HPLC (purity); GC (residual solvents); Assay (HPLC); Assay Boron and Copper (ICP-MS); microbiology test **Chemical Name:** CA index name: Copper(1+), tetrakis[1-(isocyano-kappaC)-2-methoxy-2-methylpropane]-, (T-4)-, tetrafluoroborate(1-) **Synonymes:** Tetrakis (2-methoxy isobutyl isonitrile) Copper (I) tetrafluoroborate; Propane, 1-isocyano-2-methoxy-2-methyl-, copper complex; Cardio-Spect; [Cu(MIBI)4]BF4; Copper tetraMIBI tetrafluoroborate; CuMibi; Copper MIBI; Cu MIBI **Literature:** Same as product number 7210.	**7211.0100: 100 mg per vial** **7211.1000: 1 g per vial** **Please inquire for customized filling and bulk quantities.** 

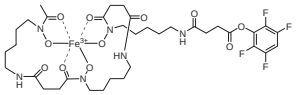
Product Number	Product	Order number / Unit
7220	**Zinc-TBI** **Ligand for labelling with ^{99m}Tc** $C_{10}H_{18Br2}N_{2Z}N$ **Molar Mass:** 391.46 [104676-71-3] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Zinc, dibromobis(2-isocyano-2-methylpropane-, (T-4) **Synonymes:** Zinc-TBI-complex; Propane, 2-isocyano-2-methyl-, zinc complex; Zn(tBuNC)Br2	**7220.0100: 100 mg per vial** **7220.1000: 1 g per vial** **Please inquire for customized filling and bulk quantities.** 

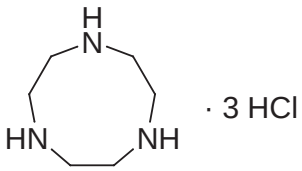
Literature:

Holman B.L. et al. A New Tc-99m-labeled Myocardial Imaging Agent, Hexakis(t-Butylisonitrile)-Technetium(I) [Tc-99m TBI]: Initial Experience in the Human. J. Nucl. Med. 1984, 25, 1350-55.

Product Number	Product	Order number / Unit
7250	**EC** **Ligand for labelling with ^{99m}Tc** $C_8H_{16}N_2O_4S_2$ **Molar Mass:** 268.36 [14344-48-0] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: L-Cysteine, N,N´-1,2-ethanediylbis- **Synonymes:** N,N´-1,2-ethylenebis-L-cysteine; L,L-Ethylenedicysteine **Literature:** Yang D. et al. Tumor specific imaging using Tc-99m and Ga-68 labeled radio-pharmaceuticals. Current Medical Imaging Reviews 2005, 1, 25-34. Verbruggen A.M. et al. Technetium-99m-L,L-Ethylene-dicysteine: A renal imaging agent. I. Labeling and evaluation in Animals. J. Nucl. Med. 1992, 33, 551-57.	**7250.0100: 100 mg per vial** **7250.1000: 1 g per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
7260	**ECD** **Ligand for labelling with ^{99m}Tc** $C_{12}H_{24}N_2O_4S_2 \cdot 2$ HCl **Molar Mass:** 397.38 [14344-58-2] [121251-02-3] (free base) Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: L-Cysteine, N,N´-1,2-ethanediylbis-, diethyl ester, dihydrochloride **Synonymes:** N,N´-1,2-ethylenebis-L-cysteine, diethyl ester, dihydrochloride; Neurolite **Literature:** Tikofsky R.F. et al. Radiopharmaceuticals for Brain Imaging: The Technologist's Perspective. J. Nucl. Med. Technol. 1993, 21, 57-60. Hung J.C. et al. Rapid quality control procedure for technetium-99-bicisate. J. Nucl. Med. Technol. 1995, 23, 190-94. Hung J.C. et al. Rapid preparation method for technetium-99m bicisate. Eur. J. Nucl. Med. Mol. Imag. 1997, 24, 655-659.	**7260.0100: 100 mg per vial** **7260.1000: 1 g per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
7270	**TFP-N-sucDf-Fe** **Precursor for mAb-N-sucDf-^{89}Zr** **^{89}Zr-conjugates with monoclonal antibodies** $C_{35}H_{49}F_4FeN_6O_{11}$ **Molar Mass:** 861.64 [676596-40-0] Brown to red solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** CA index name: Iron, [2,3,5,6-tetrafluorophenyl 3,14,25-tri(hydroxy-κO)-2,13,24-tri(oxo-κO)-10,21,24-trioxo-3,9,14,20,25,31-hexaazapentatriacontan-35-oato(3-)]- **Synonymes:** TFP-N-Succinyldesferal-Fe **Literature:** Verel I. et al. ^{89}Zr Immuno-PET: Comprehensive Procedures for the Production of ^{89}Zr-Labeled Monoclonal Antibodies. J. Nucl. Med. 2003, 44, 1271-1281.	**Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
7281	**TACN** **Chelator for radiometals** $C_6H_{18}Cl_3N_3$ **Molar Mass:** 238.59 [58966-93-1] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 1H-1,4,7-Triazonine, octahydro-, hydrochloride (1:3) **Synonymes:** 1H-1,4,7-Triazonin, octahydro-, trihydrochloride; 1,4,7-Triazacyclononane trihydrochloride **Literature:** Fichna J. et al. Synthesis of Target-Specific Radiolabeled Peptides for Diagnostic Imaging. Bioconjugate Chem, 2003, 14, 3-17.	**Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
7284	**PrP9** **Bifunctional chelating agent**	**Please inquire for customized filling and bulk quantities.**

$C_{18}H_{44}N_3O_{16}P_3 \cdot x\ H_2O$ **Molar Mass:** 651.47

[1242003-07-1] (water free compound)

Colourless solid packaged in dark glass screw cap vials.

Purity: > 95 %

Certificates:
CoA; ^{1}H NMR spectrum

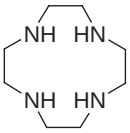
Chemical Name:
CA index name: Propanoic acid, 3,3´,3´´-[(hexahydro-1H-1,4,7-triazonine-1,4,7-triyl)tris(methylenephosphinico)]tris-

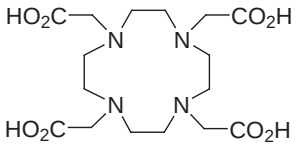
Synonymes:
TRAP-Pr;
1,4,7-triazacyclononane-1,4,7-tris[methyl(2-carboxyethyl)phosphinic acid; 3-(4,7-Bis-[(2-carboxy-ethyl)-hydroxy-phosphinoylmethyl]-[1,4,7]triazonan-1-ylmethyl-hydroxy-phosphinoyl)-propionic acid

Literature:

Notni J. et al. A Triazacyclononane-Based Bifunctional Phosphinate Ligand for the Preparation of Multimeric ^{68}Ga Tracers for Positron Emission Tomography. Chem. Eur. J. 2010, 16, 7174-7185.

Notni J. et al. TRAP, a Powerful and Versatile Framework for Gallium-68 Radiopharmaceuticals. Chem. Eur. J. 2011, 17, 14718-14722.

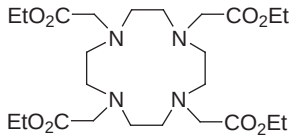
Product Number	Product	Order number / Unit
7290	**Cyclen** $C_8H_{20}N_4$ **Molar Mass:** 172.27 [294-90-6] White to off-white solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum; GC **Chemical Name:** CA index name: 1,4,7,10-Tetraazacyclododecane **Synonymes:** 1,4,7,10-Tetrazacyclododecane; Tetraaza-12-crown-4 **Literature:** De León-Rodríguez et al. The Synthesis and Chelation Chemistry of DOTA-Peptide Conjugates. Bioconjugate Chem. 2008, 19, 391-402.	**7290.0010: 10 mg per vial** **7290.0100: 100 mg per vial** **7290.1000: 1 g per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
7300	**DOTA** **Cation complexation agent** $C_{16}H_{28}N_4O_8 \cdot H_2O$ **Molar Mass:** 404.42 [60239-18-1] Colourless crystals packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 1,4,7,10-Tetraazacyclododecane-1,4,7,10-tetraacetic acid **Synonymes:** 1,4,7,10-Tetraazacyclododecane-N,N´,N´´,N´´´-tetraacetic acid; NSC 681107; Tetraxetan	**7300.0010: 10 mg per vial** **7300.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

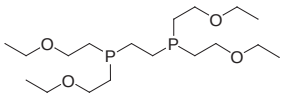
Li W.P. et al. DOTA-D-Tyr1-Octreotate: A Somatostatin Analogue for Labeling with Metal and Halogen Radionuclides for Cancer Imaging and Therapy. Bioconjugate Chem. 2002, 13, 721-728.

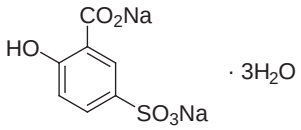
Traub T. et al. ^{111}In-DOTA-Lanreotide Scintigraphy in Patients with Tumors of the Lung. J. Nucl. Med. 2001, 42, 1309-1315.

Product Number	Product	Order number / Unit
7301	**DOTAEt** **Cation complexation agent** $C_{24}H_{44}N_4O_8$ **Molar Mass:** 516.63 [137076-50-7] Colourless to yellowish powder packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: 1,4,7,10-Tetraazacyclododecane-1,4,7,10-tetraacetic acid, tetraethyl ester **Synonymes:** Tetraethyl 2,2´,2´´,2´´´-(1,4,7,10-tetraazacyclododecane-1,4,7,10-tetrayl)tetraacetate	**7301.0010: 10 mg per vial** **7301.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Sangsuriyan J. et al. Radiolabelling of monoclonal antibodies for radiotherapy. International Atomic Energy Agency, [Technical Document], IAEA-TECDOC 2003, IAEA-TECDOC-1359, Labeling Techniques of Biomolecules for Targeted Radiotherapy, 165-182.

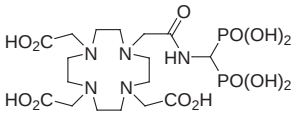
Product Number	Product	Order number / Unit
7310	**Tetrofosmin** **Complexation agent for [^{99m}Tc]-Labelling** $C_{18}H_{40}O_4P_2$ **Molar Mass:** 382.46 [127502-06-1] Yellowish liquid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{31}P NMR spectra **Chemical Name:** CA index name: 3,12-Dioxa-6,9-diphosphatetradecane, 6,9-bis(2-ethoxyethyl)- **Synonymes:** Tetrofosmin, P 53 **Literature:** Kelly J.D. et al. Technetium-99m-Tetrofosmin as a New Radiopharmaceutical for Myocardial Perfusion Imaging. J. Nucl. Med. 1993, 34, 222-227. Higley B. et al. Technetium-99m,-1,2-bis[bis(2-Ethoxy-ethyl)Phosphino]Ethane: Human Biodistribution, Dosimetry and Safety of a New Myocardial Perfusion Imaging Agent. J. Nucl. Med. 1993, 34, 30-38.	**7310.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
7312	**Disodium sulfosalicylate** **Reagent for the preparation of [^{99m}Tc]Tetrofosmin** $C_7H_4Na_2O_6S \cdot 3\ H_2O$ **Molar Mass:** 316.19 (trihydrate) [56343-01-2] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Benzoic acid, 2-hydroxy-5-sulfo-, disodium salt **Synonymes:** 5-Sulfosalicylic acid disodium salt; Disodium 5-sulfosalicylate; 2-(Sulfooxy)benzoic acid disodium salt; Salicylsulfonic acid disodium salt; Salicylsulfuric acid disodium salt **Literature:** Kelly J.D. et al. Technetium-99m-Tetrofosmin as a New Radiopharmaceutical for Myocardial Perfusion Imaging. J. Nucl. Med. 1993, 34, 222-227. Higley B. et al. Technetium-99m,-1,2-bis[bis(2-Ethoxy-ethyl)Phosphino]Ethane: Human Biodistribution, Dosimetry and Safety of a New Myocardial Perfusion Imaging Agent. J. Nucl. Med. 1993, 34, 30-38.	**7312.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
7320	**BPAMD**	

Precursor for radiolabelled BPAMD (Bis(phosphonate) Monoamide Analogues of DOTA)

Please inquire for customized filling and bulk quantities.



$C_{17}H_{33}N_5O_{13}P_2$ **Molar Mass:** 577.42

[872469-60-8]

Colourless to off-white solid packaged in dark glass screw cap vials.

Purity: > 95 %

Certificates:
CoA; MS (identity); HPLC (purity)

Chemical Name:
CA index name: 1,4,7,10-Tetraazacyclododecane-1,4,7-triacetic acid, 10-[2-[(diphosphonomethyl)amino]-2-oxoethyl]-

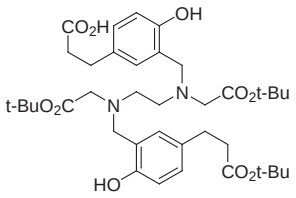
Synonymes:
n/a

Literature:
Vitha T. et al. Lanthanide(III) Complexes of Bis(phosphonate) Monoamide Analogues of DOTA: Bone-Seeking Agents for Imaging and Therapy. J. Med. Chem. 2008, 51, 677-683.

Product Number	Product	Order number / Unit
7330	**HBED-CC-tris(tBu)ester**	

Bifunctional chelating agent

Please inquire for customized filling and bulk quantities.



Caution, hygroscopic!

$C_{38}H_{56}N_2O_{10}$ **Molar Mass:** 700.86

CAS-RN not yet assigned

colourless to off-white solid packaged in dark glass vials.

Purity: > 95 %

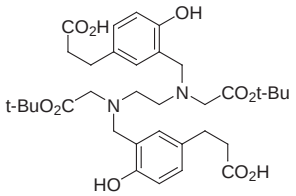
Certificates:
CoA; ^{1}H NMR spectrum; HPLC; ESI-MS

Chemical Name:
3-(3-[(2-[5-(2-tert-Butoxycarbonyl-ethyl)-2-hydroxy-benzyl]-tert-butoxycarbonylmethyl-amino-ethyl)-tert-butoxycarbonylmethyl-amino]-methyl-4-hydroxy-phenyl)-propionic acid

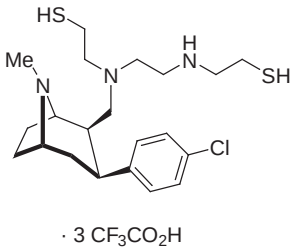
Synonymes:
N,N'-Bis[2-hydroxy-5-(carboxyethyl)-benzyl]ethylenediamine-N,N'-diacetic acid, tris tert-butyl ester

Literature:
Eder M. et al. ^{68}Ga-labelled recombinant antibody variants for immuno-PET imaging of solid tumors. Eur. J. Nucl. Med. Mol. Imaging. 2010, 37, 1397-1407.

Eder M. et al. ^{68}Ga-Complex Lipophilicity and the Targeting Property of a Urea-Based PSMA Inhibitor for PET Imaging. Bioconjugate Chem. 2012, 23, 688-697.

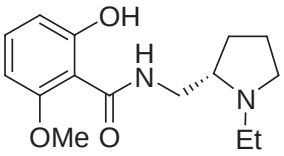
Product Number	Product	Order number / Unit
7331	**HBED-CC-di(tBu)ester** **Bifunctional chelating agent** $C_{34}H_{48}N_2O_{10}$ **Molar Mass:** 644.75 CAS-RN not yet assigned Colourless to yellowish solid packaged in dark glass vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum; HPLC; ESI-MS **Chemical Name:** 3-(3-[tert-Butoxycarbonylmethyl-(2-tert-butoxycarbonylmethyl-[5-(2-carboxy-ethyl)-2-hydroxy-benzyl]-amino-ethyl)-amino]-methyl-4-hydroxy-phenyl)-propionic acid **Synonymes:** N,N'-Bis[2-hydroxy-5-(carboxyethyl)-benzyl]ethylenediamine-N,N'-diacetic acid, bis tert-butyl ester	**Please inquire for customized filling and bulk quantities.** 

Literature:
Schäfer M. et al. A dimerized urea-based inhibitor of the prostate-specific membrane antigen for 68Ga-PET imaging of prostate cancer. EJNMMI Research 2012, 2, 23.

Product Number	Product	Order number / Unit
7400	**TRODAT** **Ligand for labelling with ^{99m}Tc** $C_{21}H_{34}ClN_3S_2 \cdot C_6H_3F_9O_6$ **Molar Mass:** 770.16 [189950-11-6] (free base) Colourless oil packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra **Chemical Name:** CA index name: Ethanethiol, 2-[[2-[[[(1R,2R,3S,5S)-3-(4-chlorophenyl)-8-methyl-8-azabicyclo[3.2.1]oct-2-yl]methyl](2-mercaptoethyl)amino]ethyl]amino]-, trifluoroacetate salt (1:3) **Synonymes:** Ethanethiol, 2-[[2-[[[3-(4-chlorophenyl)-8-methyl-8-azabicyclo[3.2.1]-oct-2-yl]methyl](2-mercaptoethyl)amino]ethyl]amino]-, [1R-(exo,exo)]-, trifluoroacetate salt (1:3)	**7400.0001: 1 mg per vial** **7400.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**  · 3 CF_3CO_2H

Literature:
Meegalla S.K. et al. Synthesis and Characterization of Technetium-99m-Labeled Tropanes as Dopamine Transporter-Imaging Agents J. Med. Chem. 1997, 40, 9-17.

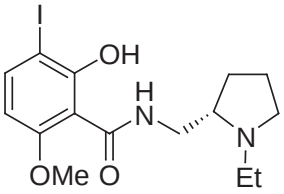
Choi S.R. et al. An improved kit formulation of a dopamine transporter imaging agent: [Tc-99m]TRODAT-1 Nucl. Med. Biol. 1999, 26, 461-466.

Product Number	Product	Order number / Unit
7500	**S-(-)-BZM** **Precursor for S-(-)-[$^{123/125}$I]IBZM** $C_{15}H_{22}N_2O_3$ **Molar Mass:** 278.35 [84226-04-0] Pale yellow semisolid or solid. packaged in dark glass crimp cap vials (7500.0001) or screw cap vials (7500.0010). **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Benzamide, N-[[(2S)-1-ethyl-2-pyrrolidinyl]methyl]-2-hydroxy-6-methoxy-; Benzamide, N-[(1-ethyl-2-pyrrolidinyl)methyl]-2-hydroxy-6-methoxy-, (S)- **Synonymes:** BZM; S-(-)-2-Hydroxy-6-methoxy-N-[(1-ethyl-2-pyrrolidinyl)methyl]benzamide	**7500.0001: 1 mg per vial** **7500.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Kung H.F. et al. Dopamine D-2 receptor Imaging Radiopharmaceuticals: Synthesis, Radiolabeling and in Vitro binding of R(+)- and S(-)-3-iodo-2-hydroxy-6-methoxy-N-[(1-ethyl-2-pyrrolidinyl)methyl]benzamide. J. Med. Chem. 1988, 31, 1039-1043.

Norinder U. et al. A quantitative structure-activity relationship for some dopamine D2 antagonists of benzamide type. Acta Pharm. Nord. 1992, 4, 73-78.

Product Number	Product	Order number / Unit
7510	**S-(-)-IBZM** **Reference standard for S-(-)-[*I]IBZM** **Precursor for S-(-)-[$^{123/125}$I]IBZM** $C_{15}H_{21}IN_2O_3$ **Molar Mass:** 404.24 [84226-06-2] Dark yellow oil packaged in dark glass crimp cap vials (7510.0001) or screw cap vials (7510.0010). **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum **Chemical Name:** CA index name: Benzamide, N-[[(2S)-1-ethyl-2-pyrrolidinyl]methyl]-2-hydroxy-3-iodo-6-methoxy- **Synonymes:** Iodobenzamide, (S)-(-)-3-Iodo-2-hydroxy-6-methoxy-N[(1-ethyl-2-pyrrolidinyl)methyl]benzamide	**7510.0001: 1 mg per vial** **7510.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Kung H.F. et al. Dopamine D-2 receptor Imaging Radiopharmaceuticals: Synthesis, Radiolabeling and in Vitro binding of R(+)- and S(-)-3-iodo-2-hydroxy-6-methoxy-N-[(1-ethyl-2-pyrrolidinyl)methyl]benzamide. J. Med. Chem. 1988, 31, 1039-1043.

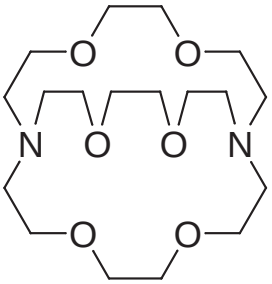
Cordes M. et al. Initial experience with SPECT examinations using [^{123}I]IBZM as a D2-dopamine receptor antagonist in Parkinson´s disease. Eur. J. Radiol. 1991, 12, 182.

Innis R.B. et al. Amphetamine-stimulated dopamine release competes in vivo for [^{123}I]IBZM binding to the D2receptor in nonhuman primates. Synapse 1992, 10, 177.

Ichise M. et al. Iodine-123-IBZM dopamine D2receptor and technetium -99 m-HMPAO brain perfusion SPECT in the evaluation of patients with and subjects at risk for Huntington´s disease J. Nucl. Med. 1993, 34, 1274.

Product Number	Product	Order number / Unit
7520	**Gallium Citrate (complex)** **Reference standard for [^{67}Ga]Gallium citrate** $C_{12}H_{33}GaN_4O_{18}$ **Molar Mass:** 591.13 CAS-RN not yet assigned Colourless crystals packaged in dark glass screw cap vials. **Purity:** not defined **Certificates:** elemental analysis **Chemical Name:** ammonium gallium(III) citrate **Synonymes:** $(NH_4)_4[Ga(C_6H_5O_7)(C_6H_4O_7)] \cdot 4\ H_2O$ **Literature:** no literature reference available	**7520.0001: 1 mg per vial** **7520.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** $(NH_4)_4[Ga(C_6H_5O_7)(C_6H_4O_7)] \cdot 3\ H_2O$

Product Number	Product	Order number / Unit
7600	**16-Iodohexadecanoic acid** **Reference standard for 16-[*I]Iodohexadecanoic acid** **Precursor for 16-[^{123}I]Iodohexadecanoic acid** $C_{16}H_{31}IO_2$ **Molar Mass:** 382.32 [2536-36-9] Colourless solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{13}C NMR spectra **Chemical Name:** CA index name: Hexadecanoic acid, 16-iodo- **Synonymes:** IHDA **Literature:** DeGrado T.R. et al. Comparison of 16-iodohexadecanoic acid (IHDA) and 15-(p-iodophenyl)pentadecanoic acid (IPPA) metabolism and kinetics in the isolated rat heart. Eur. J. Nucl. Med. 1988, 14, 600-606.	**7600.0010: 10 mg per vial** **7600.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.**

Product Number	Product	Order number / Unit
800	**Cryptand 222** **Aminopolyether used to dissolve K^+ salts in nucleophilic [^{18}F]labelling reactions** $C_{18}H_{36}N_2O_6$ **Molar Mass:** 376.49 [23978-09-8] Colourless crystals packaged in dark glass crimp cap vials (8000.0015 and 8000.0020) or screw cap vials (8000.0100, 8000.0250, and 8000.1000). **Purity:** > 99 % **Certificates:** CoA; ^{1}H NMR spectrum; GC-MS; IR spectrum **Chemical Name:** CA index name: 4,7,13,16,21,24-Hexaoxa-1,10-diazabicyclo[8.8.8]hexacosane **Synonymes:** 2,2,2-Crypt; 2,2,2-Cryptand; 2,2,2-Cryptate; Crypt-2,2,2; Cryptand 2.2.2; Cryptand C 222; Cryptate 222; Cryptating agent 222; Cryptofix 222; Kryptand 222; Kryptofix 222;	**800.0015: 15 mg per vial** **800.0020: 20 mg per vial** **800.0025: 25 mg per vial** **800.0100: 100 mg per vial** **800.0250: 250 mg per vial** **800.1000: 1 g per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Huang J.C. Comparison of Various Requirements of the Quality Assurance Procedures for ^{18}F-FDG Injection. J. Nucl. Med. 2002, 43, 1495-1506.

Lemaire C. et al. No-carrier-added regioselective preparation of 6-[^{18}F]fluoro-L-DOPA. J. Nucl. Med. 1990, 31, 1247-51.

Moerlein S. et al. Elimination of contaminant Kryptofix 2.2.2 in the routine production of 2-[^{18}F]fluoro-2-deoxy-D-glucose. Int. J. Rad. Appl. Instrum. [A] 1989, 40, 741-3.

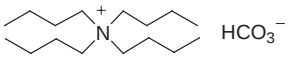
Chaly T. et al. Thin layer chromatographic detection of Kryptofix 222 in the routine synthesis of [^{18}F]2-fluoro-2-deoxy-D-glucose. Int. J. Rad. Appl. Instrum. [B] 1989, 16, 385-7.

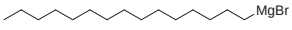
Product Number	Product	Order number / Unit
801	**Lithium Aluminium Hydride in THF bulk** **1 M solution in dried tetrahydrofuran with controlled ^{12}C-background** **Reagent for ^{11}C radiochemistry** Manufactured and packaged in argon atmosphere. Repeated extractions from vial in argon atmosphere does not affect product quality. $LiAlH_4$ **Molar Mass:** 37.95 [16853-85-3] Clear colourless liquid packaged in clear glass vials (2 ml) sealed with teflon-faced rubber stoppers and tear-off crimp caps. **Purity:** $\leq$ 5 ppm Carbonate $\leq$ 50 ppm Methanol **Certificates:** CoA; Background 12C ([12C]Carbonate determined as [12C]CO2 and [12C]Methanol as methyl acetate by gas chromatography) **Chemical Name:** CA index name: lithium aluminium hydride **Synonymes:** Aluminium lithium tetrahydride; Lithium alanate; Lithium aluminium tetrahydride; Lithium tetrahydroaluminate **Literature:** Harada N. et al. Measurement of the carbon source which is responsible for dilution in Carbon-11 labelling reactions. J. Appl. Radiat. Isot. 1993, 44, 629. Marazano C. et al. Synthesis of [^{11}C]formaldehyde. Int. J. Appl. Radiat. Isot. 1977, 28, 49. Iwata R. et al. Comparative study of specific activity of (^{11}C(methyl iodide. A search for the source of carrier carbon. J. Appl. Radiat. Isot. 1988, 39, 1.	**801.0001: 1 ml per vial** **Please inquire for customized filling and bulk quantities.** $LiAlH_4$

Product Number	Product	Order number / Unit
802	**Lithium aluminium hydride (0.1 M in THF)** **0.1 M solution in dried tetrahydrofuran with controlled ^{12}C-background** Manufactured and packaged in argon atmosphere. Repeated extractions from vial in argon atmosphere does not affect product quality. $LiAlH_4$ **Molar Mass:** 37.95 [16853-85-3] Clear colourless liquid packaged in clear glass vials (2 ml) sealed with teflon-faced rubber stoppers and tear-off crimp caps. **Purity:** $\leq$ 5 ppm Carbonate $\leq$ 50 ppm Methanol **Certificates:** CoA; Background 12C ([12C]Carbonate determined as [12C]CO2 and [12C]Methanol as methyl acetate by gas chromatography) **Chemical Name:** CA index name: lithium aluminium hydride **Synonymes:** Aluminium lithium tetrahydride; Lithium alanate; Lithium aluminium tetrahydride; Lithium tetrahydroaluminate **Literature:** Same as product number 801.	**802.0001: 1 ml per vial** **Please inquire for customized filling and bulk quantities.** $LiAlH_4$

Product Number	Product	Order number / Unit
803	**Lithium aluminium hydride (0.25 M in THF)** **0.25 M solution in dried tetrahydrofuran with controlled ^{12}C-background** Manufactured and packaged in argon atmosphere. Repeated extractions from vial in argon atmosphere does not affect product quality. $LiAlH_4$ **Molar Mass:** 37.95 [16853-85-3] Clear colourless liquid packaged in clear glass vials (2 ml) sealed with teflon-faced rubber stoppers and tear-off crimp caps. **Purity:** $\leq$ 5 ppm Carbonate $\leq$ 50 ppm Methanol **Certificates:** CoA; Background 12C ([12C]Carbonate determined as [12C]CO2 and [12C]Methanol as methyl acetate by gas chromatography) **Chemical Name:** CA index name: lithium aluminium hydride **Synonymes:** Aluminium lithium tetrahydride; Lithium alanate; Lithium aluminium tetrahydride; Lithium tetrahydroaluminate **Literature:** Same as product number 801.	**803.0001: 1 ml per vial** **Please inquire for customized filling and bulk quantities.** $LiAlH_4$

Product Number	Product	Order number / Unit
804	**Lithium aluminium hydride (0.05 M in THF)** **0.05 M solution in dried tetrahydrofuran with controlled ^{12}C-background** Manufactured and packaged in argon atmosphere. Repeated extractions from vial in argon atmosphere does not affect product quality. $LiAlH_4$ **Molar Mass:** 37.95 [16853-85-3] Clear colourless liquid packaged in clear glass vials (2 ml) sealed with teflon-faced rubber stoppers and tear-off crimp caps. **Purity:** $\leq$ 5 ppm Carbonate $\leq$ 50 ppm Methanol **Certificates:** CoA; Background 12C ([12C]Carbonate determined as [12C]CO2 and [12C]Methanol as methyl acetate by gas chromatography) **Chemical Name:** CA index name: lithium aluminium hydride **Synonymes:** Aluminium lithium tetrahydride; Lithium alanate; Lithium aluminium tetrahydride; Lithium tetrahydroaluminate **Literature:** Same as product number 801.	**804.0001: 1 ml per vial** **Please inquire for customized filling and bulk quantities.** $LiAlH_4$

Product Number	Product	Order number / Unit
808	**Tetrabutylammonium Hydrogen Carbonate (0.075 M) - Aqueous solution, stabilized with ethanol** **Tested for sterility and bacterial endotoxins according to Ph. Eur.** Manufactured according to GMP requirements for APIs (ICH Q7) $C_{17}H_{37}NO_3$ **Molar Mass:** 303.48 [17351-62-1] Clear colourless liquid packaged in PP vials with crimp cap. **Purity:** **Certificates:** CoA; pH; Assay; bacterial endotoxines/LAL test; test for sterility **Chemical Name:** CA index name: Tetrabutylammonium bicarbonate **Synonymes:** Tetrabutylammonium hydrogen carbonate solution **Literature:** TBA solution is designed as an reagent for the synthesis of [^{18}F]FDG using the GE TRACERlab FXFDG Synthesizer(r) module (alkaline or acidic TBA method).	**808.0000.6: 0.6 ml per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
831	**Pentadecylmagnesium bromide 0.5 M in diethyl ether** **Reagent for synthesis of [^{11}C]palmitic acid** Manufactured and packaged in argon atmosphere. Repeated extractions from vial in argon atmosphere possible, but not recommended. $C_{15}H_{31}BrMg$ **Molar Mass:** 315.62 [78887-70-4] Yellow-brown liquid, may contain some crystalline particles packaged in amber glass vials (1 ml) sealed with teflon-faced rubber stoppers and tear-off crimp caps containing 1 ml of 0.5 M $C_{15}H_{31}BrMg$ solution in diethylether. **Purity:** > 95 % **Certificates:** CoA; Purity; Assay (molarity) **Chemical Name:** CA index names: Magnesium, bromopentadecyl-; Pentadecane, magnesium complex **Synonymes:** Pentadecylmagnesium bromide Grignard in diethylether **Literature:** Zielinski F. et al. Synthesis of high purity ^{11}C labeled palmitic acid for measurement of regional myocardial perfusion and metabolism. Int. J. Nucl. Med. Biol. 1984, 11, 121-128. Padgett H.C. et al. 1-[^{11}C]palmitic acid: improved radio-pharmaceutical preparation. Int. J. Appl. Radiat. Isot. 1982, 33, 1471-1472. Buckman B.O. et al. Synthesis and tissue biodistribution of [omega-^{11}C]palmitic acid. A novel PET imaging agent for cardiac fatty acid metabolism. J. Med. Chem. 1994, 37, 2481-2485.	**831.0001: 1 ml per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
832	**Lithium aluminium hydride (0.1 M in THF)** **0.1 M solution in dried tetrahydrofuran with controlled ^{12}C-background**	**832.0002.5: 2.5 ml per vial** **832.0005: 5 ml per vial** **Please inquire for customized filling and bulk quantities.**

$LiAlH_4$

Manufactured and packaged in argon atmosphere. Repeated extractions from vial in argon atmosphere does not affect product quality.

$LiAlH_4$ **Molar Mass:** 37.94

[16853-85-3]

Clear colourless liquid packaged in 10 ml clear glass vials sealed with teflon-faced rubber stoppers and tear-off crimp caps.

Purity: $\leq$ 5 ppm Carbonate $\leq$ 50 ppm Methanol

Certificates:
CoA; Background 12C ([12C]Carbonate determined as [12C]CO2 and [12C]Methanol as methyl acetate by gas chromatography)

Chemical Name:
CA index name: lithium aluminium hydride

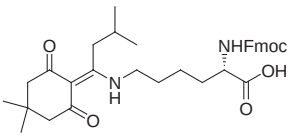
Synonymes:
Aluminium lithium tetrahydride; Lithium alanate; Lithium aluminium tetrahydride; Lithium tetrahydroaluminate

Literature:

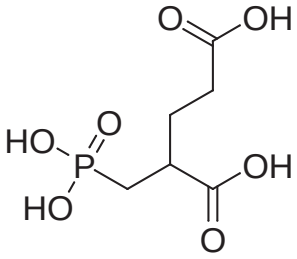
Harada N. et al. Measurement of the carbon source which is responsible for dilution in Carbon-11 labelling reactions. J. Appl. Radiat. Isot. 1993, 44, 629.

Marazano C. et al. Synthesis of [^{11}C]formaldehyde. Int. J. Appl. Radiat. Isot. 1977, 28, 49.

Iwata R. et al. Comparative study of specific activity of (^{11}C(methyl iodide. A search for the source of carrier carbon. J. Appl. Radiat. Isot. 1988, 39, 1.

Product Number	Product	Order number / Unit
9500	**Fmoc-Lys(ivDde)-OH** **Amino acid building block for peptide synthesis** **ivDde:** **(4,4-dimethyl-2,6-dioxocyclohex-1-ylidene)-3-methylbutyl** $C_{34}H_{42}N_2O_6$ **Molar Mass:** 574.71 [204777-78-6] Colourless to off-white solid packaged in dark glass vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; ^{1}H NMR spectrum; HPLC **Chemical Name:** Sequence: Fmoc-Lys(ivDde)-OH **Synonymes:** L-Lysine, N6-[1-(4,4-dimethyl-2,6-dioxocyclohexylidene)-3-methylbutyl]-N2-[9H-fluoren-9-yl(methoxy)carbonyl]-; N-α-Fmoc-N-ε-1-(4,4-dimethyl-2,6-dioxocyclohex-1-ylidene)-3-methylbutyl-L-Lysine; 6-[1-(4,4-Dimethyl-2,6-dioxo-cyclohexylidene)-3-methyl-butylamino]-2-(9H-fluoren-9-ylmethoxycarbonylamino)-hexanoic acid **Literature:** Bycroft B.W. et al. A Novel Lysine-protecting Procedure for Continuous Flow Solid Phase Synthesis of Branched Peptides. J. Chem. Soc., Chem. Commun. 1993, 778-779.	**Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9510	**PMPA** **Inhibitor of glutamate carboxypeptidase 2 (GCP II/N-acetylated α-linked dipeptidase/NAALADase)**	**Please inquire for customized filling and bulk quantities.**



$C_6H_{11}O_7P$ **Molar Mass:** 226.12

[173039-10-6]

colourless highly viskous oil packaged in dark glass vials.

Bitte Patentschutz klären.

Purity: > 95 %

Certificates:
CoA; ^{1}H NMR spectrum

Chemical Name:
2-(Phosphonomethyl)pentane-1,5-dioic acid

Synonymes:
PMPA (NAALADase inhibitor)

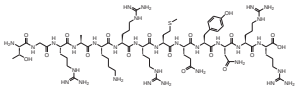
Literature:

Jackson et al. Design, synthesis, and biological activity of a potent inhibitor of the neuropeptidase N-acetylated α-linked acidic dipeptidase. J.Med.Chem. 1996, 39, 619

Slusher et al. Selective inhibition of NAALADase, which converts NAAG to glutamate, reduces ischemic brain injury. Nat.Med. 1999, 5, 1396

Thomas et al. NAALADase inhibition protects motor neurons against chronic glutamate toxicity. Eur.J.Pharmacol. 2003, 471, 177

Product Number	Product	Order number / Unit
9600	**Ubiquicidin (29-41) acetate** **Precursor for [^{99m}Tc]Ubiquicidin (29-41) Infection-Imaging Agent**	**9600.0010: 10 mg per vial** **9600.0020: 20 mg per vial** **9600.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.**



$C_{68}H_{121}N_{31}O_{18}S$ **Molar Mass:** 1691.95

[216867-99-1] (net peptide)

Colourless to off-white freeze-dried solid packaged in dark glass screw cap vials.

Purity: $\geq$ 95 %

Certificates:
CoA; MS (identity); HPLC (purity)

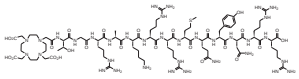
Chemical Name:
Sequence:
H-Thr-Gly-Arg-Ala-Lys-Arg-Arg-Met-Gln-Tyr-Asn-Arg-Arg-OH
Supplied as acetate salt

Synonymes:
(29-41)-Ubiquicidin

Literature:

Welling M.M. et al. Radiochemical and biological characteristics of ^{99m}Tc-UBI 29-41 for imaging of bacterial infections. Nucl. Med. Biol. 2002, 29, 413-422.

Akhtar M.S. et al. Antimicrobial Peptide ^{99m}Tc-Ubiquicidin 29-41 as Human Infection-Imaging Agent: Clinical Trial. J. Nucl. Med. 2005, 46, 567-573.

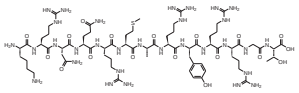
Product Number	Product	Order number / Unit
9601	**DOTA-Ubiquicidin (29-41) acetate** **Precursor for Infection Imaging Agents** $C_{84}H_{147}N_{35}O_{25}S$ **Molar Mass:** 2079.4 (net peptide) CAS-RN not yet assigned Colourless to off-white freeze-dried solid packaged in screw cap vials. **Purity:** > 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: DOTA-Thr-Gly-Arg-Ala-Lys-Arg-Arg-Met-Gln-Tyr-Asn-Arg-Arg-OH, supplied as acetate salt **Synonymes:** n/a **Literature:** no literature reference available	**Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9602	**Scrambled Ubiquicidin (29-41)**	**9602.0001: 1 mg per vial** **9602.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_{68}H_{121}N_{31}O_{18}S$ **Molar Mass:** 1692.95

CAS-RN not yet assigned

Colourless to off-white freeze-dried solid packaged in screw cap vials.



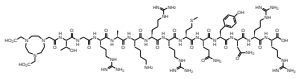
Purity: $\geq$ 95 %

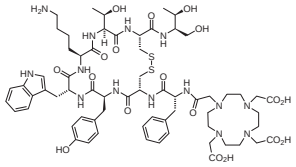
Certificates:
CoA; MS (identity); HPLC (purity)

Chemical Name:
Sequence:
H-Lys-Arg-Asn-Gln-Arg-Met-Ala-Arg-Tyr-Arg-Arg-Gly-Thr-OH

Synonymes:
(29-41)-Ubiquicidin, scrambled; L-Threonine,
L-lysyl-L-arginyl-L-asparaginyl-L-glutaminyl-L-arginyl-L-methionyl-
L-alanyl-L-arginyl-L-tyrosyl-L-arginyl-L-arginylglycyl-

Literature:
Welling M.M. et al. Radiochemical and biological characteristics of ^{99m}Tc-UBI 29-41 for imaging of bacterial infections. Nucl. Med. Biol. 2002, 29, 413-422.

Product Number	Product	Order number / Unit
9603	**NOTA-Ubiquicidin (29-41) acetate** **Precursor for Infection Imaging Agents** $C_{80}H_{140}N_{34}O_{23}S \cdot x\ CH_3CO_2H$ **Molar Mass:** 1978.25 (net peptide) CAS-RN not yet assigned Colourless to off-white freeze-dried solid packaged in plastic screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: NOTA-Thr-Gly-Arg-Ala-Lys-Arg-Arg-Met-Gln-Tyr-Asn-Arg-Arg-OH NOTA = 2-[4,7-Bis-(carboxymethyl)-[1,4,7]triazonan-1-yl]-acetyl **Synonymes:** n/a **Literature:** Vilche M. et al. ^{68}Ga-NOTA-UBI-29-41 as a PET Tracer for Detection of Bacterial Infection. J. Nucl. Med. 2016, 57, 622-627.	**9603.0002: 2 mg per vial** **Please inquire for customized filling and bulk quantities.** 

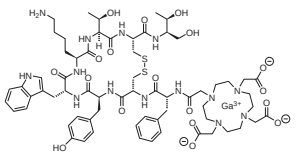
Product Number	Product	Order number / Unit
9702	**DOTATOC (GMP)** **Precursor for radiolabelled DOTA-TOC** **Ligand for somatostatin receptors** Manufactured according to GMP requirements for APIs for use in clinical trials (ICH Q7 chapter 19) $C_{65}H_{92}N_{14}O_{18}S_2$ **Molar Mass:** 1421.7 (net peptide) [204318-14-9] White to off-white solid packaged in plastic vials **Purity:** $\geq$ 98 % **Certificates:** CoA with HPLC (identity, purity, assay); GC (residual Solvents, water content, counter-ion); microbiology test **Chemical Name:** Sequence: DOTA-D-Phe-Cys-Tyr-D-Trp-Lys-Thr-Cys-Thr(ol), cyclic disulfide **Synonymes:** DOTA-TOC acetate; DOTA-[Tyr^3]-octreotide; Edotreotide; CA index name: L-Cysteinamide, N-[[4,7,10-tris(carboxymethyl)-1,4,7,10-tetraazacyclododec-1-yl]acetyl]-D-phenylalanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-L-threonyl-N-[(1R,2R)-2-hydroxy-1-(hydroxymethyl)propyl]-, cyclic(2→7)-disulfide, supplied as acetate salt **Literature:** Forrer F. et al. Targeted radionuclide therapy with 90Y-DOTATOC in patients with neuroendocrine tumors. Anticancer Res. 2006, 26, 703-707. Koukouraki S. et al. Evaluation of the pharmacokinetics of (68)Ga-DOTATOC in patients with metastatic neuroendocrine tumours scheduled for (90)Y-DOTATOC therapy. Eur. J. Nucl. Med. Mol. Imaging 2006, 33, 460-466.	**Please contact** **ITG Isotope Technologies Garching GmbH** **Sales Dept.** **Lichtenbergstr. 1** **D-85748 Garching, Germany** **Phone +49 89 289 13908** **Fax +49 89 289 13929** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9703	**Ga-DOTA-TOC acetate**	**Please inquire for customized filling and bulk quantities.**

$C_{65}H_{89Ga}N_{14}O_{18}S_2$ **Molar Mass:** 1486.52 (net peptide)

[293295-70-2]

Colourless to off-white solid packaged in dark glass screw cap vials.



Purity: $\geq$ 95 %

Certificates:
CoA; MS (identity); HPLC (purity)

Chemical Name:
Sequence: DOTA(Ga)-D-Phe-Cys-Tyr-D-Trp-Lys-Thr-Cys-Thr(ol), cyclic disulfide.

Synonymes:
natGa-Edotreotide; natGa-SMT487; natGa-DOTA-[Tyr^3]octreotide; Gallium, [N-[[4,7,10-tris[(carboxy-κO)methyl]-1,4,7,10-tetraazacyclododec-1-yl-κN1,κN4,κN7,κN10]acetyl-κO]-D-phenylalanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-L-threonyl-N-[(1R,2R)-2-hydroxy-1-(hydroxymethyl)propyl]-L-cysteinamide(2$\rightarrow$7)-disulfidato(3-)]-

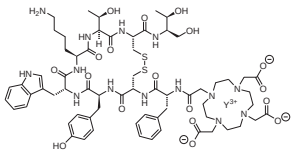
Literature:
no literature reference available

Product Number	Product	Order number / Unit
9704	**Y-DOTA-TOC** **Reference Standard for 90Y-DOTA-TOC**	**Please inquire for customized filling and bulk quantities.**

$C_{65}H_{89}N_{14}O_{18}S_2Y$ **Molar Mass:** 1507.52 (net peptide)

[293295-66-6]

Colourless to off-white solid packaged in dark glass screw cap vials.



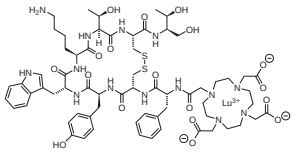
Purity: $\geq$ 95 %

Certificates:
CoA; MS (identity); HPLC (purity)

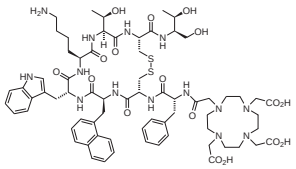
Chemical Name:
Sequence: DOTA(Y)-D-Phe-Cys-Tyr-D-Trp-Lys-Thr-Cys-Thr(ol), cyclic disulfide.

Synonymes:
natY-Edotreotide; natY-SMT487; natY-DOTA-[Tyr^3]octreotide; Yttrium, [N-[2-[4,7,10-tris[(carboxy-κO)methyl]-1,4,7,10-tetraazacyclododec-1-yl-κN1,κN4,κN7,κN10]acetyl-κO]-D-phenylalanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-L-threonyl-N-[(1R,2R)-2-hydroxy-1-(hydroxymethyl)propyl]-L-cysteinamide cyclic (2$\rightarrow$7)-disulfidato(3-)]-

Literature:
Villard L. et al. Cohort study of somatostatin-based radiopeptide therapy with [(90)Y-DOTA]-TOC versus [(90)Y-DOTA]-TOC plus [(177)Lu-DOTA]-TOC in neuroendocrine cancers. J. Clin. Oncol. 2012, 30, 1100-1106.

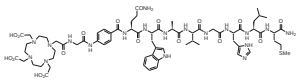
Product Number	Product	Order number / Unit
9705	**Lu-DOTA-TOC** **Reference standard for ^{177}Lu-DOTA-TOC** $C_{65}H_{89Lu}N_{14}O_{18}S_2$ **Molar Mass:** 1593.58 (net peptide) [321835-55-6] ([^{177}Lu]-DOTA-TOC) Colourless to off-white solid packaged in dark glass screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: DOTA(Lu)-D-Phe-Cys-Tyr-D-Trp-Lys-Thr-Cys-Thr(ol), cyclic disulfide. **Synonymes:** natLu-Edotreotide; natLu-SMT487; natLu-DOTA-[Tyr^3]octreotide; Lutetium-177Lu, [N-[2-[4,7,10-tris[(carboxy-κO)methyl]-1,4,7,10-tetraazacyclododec-1-yl]acetyl-κO]-D-phenylalanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-L-threonyl-N-[(1R,2R)-2-hydroxy-1-(hydroxymethyl)propyl]-L-cysteinamide cyclic(2→7)-disulfidato(3-)]-; Lutetium-177Lu, [N-[[4,7,10-tris[(carboxy-κO)methyl]-1,4,7,10-tetraazacyclododec-1-yl]acetyl-κO]-D-phenylalanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-L-threonyl-N-[(1R,2R)-2-hydroxy-1-(hydroxymethyl)propyl]-L-cysteinamide cyclic(2→7)-disulfidato(3-)]-	**Please inquire for customized filling and bulk quantities.** 

Literature:
Villard L. et al. Cohort study of somatostatin-based radiopeptide therapy with [(90)Y-DOTA]-TOC versus [(90)Y-DOTA]-TOC plus [(177)Lu-DOTA]-TOC in neuroendocrine cancers. J. Clin. Oncol. 2012, 30, 1100-1106.

Product Number	Product	Order number / Unit
9712	**DOTA-NOC acetate** **Precursor for radiolabelled DOTA-NOC** **Ligand for somatostatin receptors** $C_{69}H_{94}N_{14}O_{17}S_2$ **Molar Mass:** 1455.7 [619300-53-7] (net peptide) Colourless to off-white freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: DOTA-D-Phe-Cys-Nal-D-Trp-Lys-Thr-Cys-Thr(ol), cyclic disulfide Cys^{2,7} DOTA = N-[[4,7,10-tris(carboxymethyl)-1,4,7,10-tetraazacyclododec-1-yl]acetyl]- Nal = 3-(1-naphthalenyl)-L-alanyl Supplied as acetate salt **Synonymes:** DOTA-[Nal^3]-octreotide; CA index name: L-Cysteinamide, N-[[4,7,10-tris(carboxymethyl)-1,4,7,10-tetraazacyclododec-1-yl]acetyl]-D-phenylalanyl-L-cysteinyl-3-(1-naphthalenyl)-L-alanyl-D-tryptophyl-L-lysyl-L-threonyl-N-[(1R,2R)-2-hydroxy-1-(hydroxymethyl)propyl]-, cyclic (2→7)-disulfide	**9712.0001: 1 mg per vial** **9712.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:
Wild D. et al. ^{68}Ga-DOTANOC: a first compound for PET imaging with high affinity for somatostatin receptor subtypes 2 and 5. Eur.J. Nucl. Med. Mol. Imaging 2005, 32, 724.

Wild D. et al. DOTA-NOC, a high-affinity ligand of somatostatin receptor subtypes 2, 3 and 5 for labeling with various radiometals. Eur. J. Nucl. Med. Mol. Imaging 2003, 30, 1338-1347.

Product Number	Product	Order number / Unit
9714	**AMBA acetate** $C_{68}H_{99}N_{19}O_{18}S$ **Molar Mass:** 1502.70 [721937-56-0] (net peptide) Colourless to off-white freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 97 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: DOTA-Gly-4-Abz-Gln-Trp-Ala-Val-Gly-His-Leu-Met-NH_2 DOTA = N-[[4,7,10-tris(carboxymethyl)-1,4,7,10-tetraazacyclododec-1-yl]acetyl]- 4-Abz = 4-aminobenzoyl Supplied as acetate salt **Synonymes:** CA index name: L-Methioninamide, N-[2-[4,7,10-tris(carboxymethyl)-1,4,7,10-tetraazacyclododec-1-yl]acetyl]glycyl-4-aminobenzoyl-L-glutaminyl-L-tryptophyl-L-alanyl-L-valylglycyl-L-histidyl-L-leucyl-	**9714.0001: 1 mg per vial** **9714.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Chen J. et al. Synthesis, stabilization and formulation of [^{177}Lu]Lu-AMBA, a systemic radiotherapeutic agent for Gastrin Releasing Peptide receptor positive tumors. Appl Radiat Isot. 2008, 66, 497-505.

Waser B. et al. Selective in vitro targeting of GRP and NMB receptors in human tumours with the new bombesin tracer ^{177}Lu-AMBA. Eur. J. Nucl. Med. Mol. Imaging. 2007, 34, 95-100.

Lantry L.E. et al. ^{177}Lu-AMBA: Synthesis and characterization of a selective ^{177}Lu-labeled GRP-R agonist for systemic radiotherapy of prostate cancer. J. Nucl. Med. 2006, 47, 1144-52.

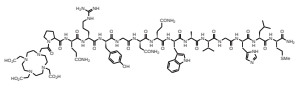
Nunn A.D. et al. Preclinical evaluation of ^{177}Lu-AMBA, a radiolabelled peptide for systemic radiotherapy and imaging of prostate cancer by targeting gastrin releasing peptide receptors. Eur. J. Cancer Suppl. 2004, 2, 89.

Product Number	Product	Order number / Unit
9715	**DOTA-[Pro^1,Tyr^4]bombesin (1-14)** **Precursor for radiolabelled DOTA-[Pro^1,Tyr^4]bombesin (1-14)**	**9715.0001: 1 mg per vial** **9715.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_{90}H_{136}N_{28}O_{25}S<$ **Molar Mass:** 2042.28

[593287-40-2] (net peptide)

Colourless to off-white freeze-dried solid packaged in screw cap vials.



Purity: $\geq$ 95 %

Certificates:
CoA; MS (identity); HPLC (purity)

Chemical Name:
Sequence: DOTA-Pro-Gln-Arg-Tyr-Gly-Asn-Gln-Trp-Ala-Val-Gly-His-Leu-Met-NH_2
DOTA = [4,7,10-Tris-(carboxymethyl)-1,4,7,10-tetraazacyclododec-1-yl]-acetyl
Supplied as acetate salt

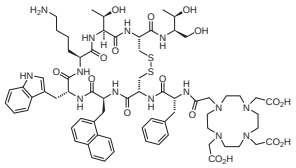
Synonymes:
Bombesin, 1-[1-[[4,7,10-tris(carboxymethyl)-1,4,7,10-tetraazacyclododec-1-yl]acetyl]-L-proline]-4-L-tyrosine-; MP2346; DOTA-[P^1, Y^4]BBN(1-14); CA index name: Bombesin, 1-[1-[2-[4,7,10-tris(carboxymethyl)-1,4,7,10-tetraazacyclododec-1-yl]acetyl]-L-proline]-4-L-tyrosine-

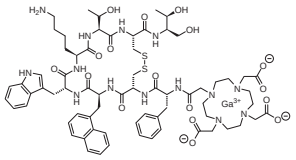
Literature:

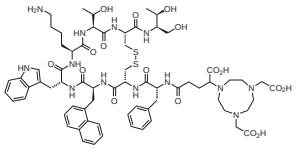
Biddlecombe G.B. et al. Molecular Imaging of Gastrin-Releasing Peptide Receptor-Positive Tumors in Mice Using ^{64}Cu- and ^{86}Y-DOTA-[Pro^1,Tyr^4]-Bombesin(1-14). Bioconjug Chem. 2007, 18, 724-30.

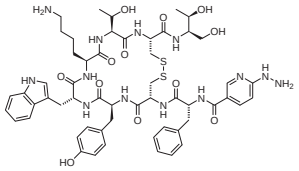
Breeman W.A. et al. Evaluation of radiolabelled bombesin analogues for receptor-targeted scintigraphy and radiotherapy. Int J Cancer. 1999, 81, 658-65.

Breeman W.A. et al. Preclinical comparison of 111In-labeled DTPA- or DOTA-bombesin analogs for receptor targeted scintigraphy and radionuclide therapy. J. Nucl. Med. 2002, 43, 1650-56.

Product Number	Product	Order number / Unit
9716	**DOTA-NOC acetate (GMP)** **Precursor for radiolabelled DOTA-NOC** **Ligand for somatostatin receptors** Manufactured according to GMP requirements for APIs for use in clinical trials (ICH Q7 chapter 19) $C_{69}H_{94}N_{14}O_{17}S_2$ **Molar Mass:** 1455.7 [619300-53-7] (net peptide) Colourless to off-white solid packaged in plastic vials **Purity:** > 98 % (9716.0001) > 97 % (9716.0000.06 9716.0000.10 9716.0000.25) **Certificates:** CoA with ESI-MS (identity); HPLC (purity); GC (residual solvents, acetate content, water content); heavy metal content (ICP-MS) **Chemical Name:** Sequence: DOTA-D-Phe-Cys-Nal-D-Trp-Lys-Thr-Cys-Thr(ol), cyclic disulfide $Cys^{2,7}$ DOTA = N-[[4,7,10-tris(carboxymethyl)-1,4,7,10-tetraazacyclododec-1-yl]acetyl]- Nal = 3-(1-naphthalenyl)-L-alanyl Supplied as acetate salt **Synonymes:** DOTA-[Nal^3]-octreotide; CA index name: L-Cysteinamide, N-[[4,7,10-tris(carboxymethyl)-1,4,7,10-tetraazacyclododec-1-yl]acetyl]-D-phenylalanyl-L-cysteinyl-3-(1-naphthalenyl)-L-alanyl-D-tryptophyl-L-lysyl-L-threonyl-N-[(1R,2R)-2-hydroxy-1-(hydroxymethyl)propyl]-, cyclic (2→7)-disulfide **Literature:** Same as product number 9712.	**9716.0000.06: 60 μg per vial** **9716.0000.10: 100 μg per vial** **9716.0000.25: 250 μg per vial** **9716.0001: 1 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9717	**Ga-DOTA-NOC** **Reference standard for [^{68}Ga]DOTA-NOC** $C_{69}H_{91Ga}N_{14}O_{17}S_2$ **Molar Mass:** 1522.40 [1027785-95-0] [1040397-47-4] [^{68}Ga]DOTA-NOC Colourless freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: DOTA(Ga)-D-Phe-Cys-1-Nal-D-Trp-Lys-Thr-Cys-Thr(ol), cyclic disulfide **Synonymes:** Ga-DOTANOC; CA index name: Gallate(1-), [N-[[4,7,10-tris[(carboxy-κ O)methyl]-1,4,7,10-tetraazacyclododec-1-yl-κ N1,κ N4,κ N7,κ N10]acetyl-κ O]-D-phenylalanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-L-threonyl-L-cysteinyl-L-threonine cyclic (2→7)-disulfidato(4-)]- **Literature:** Wild D. et al. ^{68}Ga-DOTANOC: a first compound for PET imaging with high affinity for somatostatin receptor subtypes 2 and 5. Eur.J. Nucl. Med. Mol. Imaging 2005, 32, 724.	**9717.0001: 1 mg per vial** **9717.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

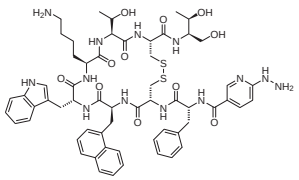
Product Number	Product	Order number / Unit
9718	**NODAGA-NOC acetate** **Precursor for radiolabelled peptides** $C_{68}H_{91}N_{13}O_{17}S_2$ **Molar Mass:** 1426.66 CAS-RN not yet assigned Colourless freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: NODAGA-D-Phe-Cys-1-Nal-D-Trp-Lys-Thr-Cys-Thr(ol), cyclic disulfide **Synonymes:** NODAGA-NOC acetate salt; L-Threonine, N-[[4,7-bis(carboxymethyl)octahydro-1H-1,4,7-triazonin-1-yl]acetyl]-D-phenylalanyl-L-cysteinyl-3-(1-naphthalenyl)-L-alanyl-D-tryptophyl-L-lysyl-L-threonyl-L-cysteinyl-, cyclic (2→7)-disulfide **Literature:** no literature reference available	**9718.0001: 1 mg per vial** **9718.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

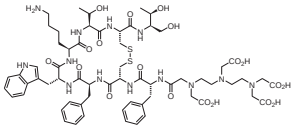
Product Number	Product	Order number / Unit
9721	**HYNIC-TOC trifluoroacetate** **Precursor for [^{99m}Tc]HYNIC-TOC** $C_{55}H_{71}N_{13}O_{12}S_2$ **Molar Mass:** 1170.40 [257943-19-4] (net peptide) Colourless to off-white freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: HYNIC-D-Phe-Cys-Tyr-D-Trp-Lys-Thr-Cys-Thr(ol), cyclic disulfide HYNIC = residue of 6-Hydrazinopyridine-3-carboxylic acid Supplied as trifluoroacetate salt **Synonymes:** HYNIC-[Tyr^3] Octreotide; CA index name: L-Cysteinamide, N-[(6-hydrazinyl-3-pyridinyl)carbonyl]-D-phenylalanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-L-threonyl-N-[(1R,2R)-2-hydroxy-1-(hydroxymethyl)propyl]-, cyclic (2→7)-disulfide **Literature:**	**9720.0001: 1 mg per vial** **9720.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Decristoforo C. et al. ^{99m}Tc-EDDA/HYNIC-TOC: a new ^{99m}Tc-labelled radiopharmaceutical for imaging somatostatin receptor-positive tumours; first clinical results and intra-patient comparison with ^{111}In-labelled octreotide derivatives. Eur. J. Nucl. Med. 2000, 27, 1318-1325.

Decristoforo C. et al. ^{99m}Tc-HYNIC-[Tyr^3]-octreotide for imaging somatostatin-receptor-positive tumors: preclinical evaluation and comparison with ^{111}In-octreotide. J. Nucl. Med. 2000, 41, 1114-1119.

Czepczynski, R. et al. Somatostatin receptor scintigraphy using 99mTc-EDDA/HYNIC-TOC in patients with medullary thyroid carcinoma. Eur J. Nucl. Med. Mol. Imaging. 2007, 34, 1635-45.

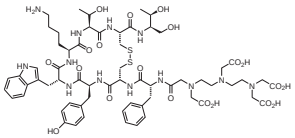
Product Number	Product	Order number / Unit
9730	**HYNIC-NOC trifluoroacetate** **Precursor for [^{99m}Tc]HYNIC-NOC** $C_{59}H_{73}N_{13}O_{11}S_2$ **Molar Mass:** 1204.42 CAS-RN not yet assigned Colourless freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: HYNIC-D-Phe-Cys-1-Nal-D-Trp-Lys-Thr-Cys-Thr(ol), cyclic disulfide **Synonymes:** L-Cysteinamide, N-[(6-hydrazino-3-pyridinyl)carbonyl]-D-phenylalanyl-L-cysteinyl-L-(1-naphthyl)alanyl-D-tryptophyl-L-lysyl-L-threonyl-N-[(1R,2R)-2-hydroxy-1-(hydroxymethyl)propyl]-, cyclic (2→7)-disulfide; HYNIC-[1-Nal^3] Octreotide **Literature:** no literature reference available	**9730.0001: 1 mg per vial** **9730.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9740	**Pentreotide trifluoroacetate** **Precursor for radiolabelled Pentreotide** **Ligand for somatostatin receptors** $C_{63}H_{87}N_{13}O_{19}S_2$ **Molar Mass:** 1394.57 [138661-02-6] (net peptide) Colourless to off-white freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: DTPA-D-Phe-Cys-Phe-D-Trp-Lys-Thr-Cys-Thr(ol), cyclic disulfide DTPA = residue of N-diethylentriamine-N,N,N´,N´´,N´´-pentaacetic acid Supplied as trifluoroacetate salt **Synonymes:** DTPA-octreotide; DTPA-SMS; SDZ 215-811; Pentetreotide; CA index name: L-Cysteinamide, N-[2-[[2-bis(carboxymethyl)amino]-ethyl](carboxymethyl)amino]ethyl]-N-(carboxymethyl)glycyl-D-phenylalanyl-L-cysteinyl-L-phenylalanyl-D-tryptophyl-L-lysyl-L-threonyl-N-[(1R,2R)-2-hydroxy-1-(hydroxymethyl)propyl]-, cyclic (3→8)-disulfide	**9740.0001: 1 mg per vial** **9740.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

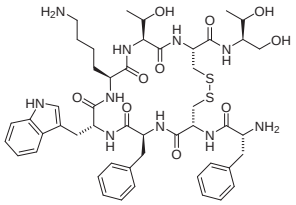
Myssiorek D. et al. ^{111}Indium pentetreotide imaging in the evalution of head and neck tumors. Laryngoscope 2005, 115, 1707-1716.

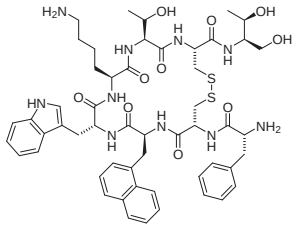
Rambaldi P.F. et al. The present and future role of ^{111}In pentetreotide in the PET era. Q. J. Nucl. Med.Mol. Imaging. 2005, 49, 225-235.

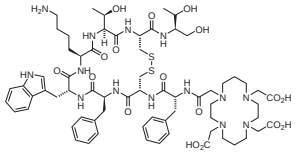
Product Number	Product	Order number / Unit
9744	**DTPA-TOC trifluoroacetate** **Precursor for radiolabelled DTPA-TOC** **Ligand for somatostatin receptors** $C_{63}H_{87}N_{13}O_{20}S_2$ **Molar Mass:** 1410.57 [147790-81-6] (net peptide) Colourless to off-white freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: DTPA-D-Phe-Cys-Tyr-D-Trp-Lys-Thr-Cys-Thr(ol), cyclic disulfide **Synonymes:** 1,2-Dithia-5,8,11,14,17-pentaazacycloeicosane, cyclic peptide deriv.; CA index name: L-Cysteinamide, N-[2-[[2-[bis(carboxymethyl)amino]ethyl](carboxymethyl)amino]ethyl]-N-(carboxymethyl)glycyl-D-phenylalanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-L-threonyl-N-[(1R,2R)-2-hydroxy-1-(hydroxymethyl)propyl]-, cyclic (3→8)-disulfide	**9744.0001: 1 mg per vial** **9744.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

De Jong M. et al. Pre-clinical comparison of [DTPA0] octreotide, [DTPA0,Tyr^3] octreotide and [DOTA0,Tyr^3] octreotide as carriers for somatostatin receptor-targeted scintigraphy and radionuclide therapy. Int. J. Cancer 1998, 75, 406-411.

Product Number	Product	Order number / Unit
9750	**Octreotide acetate** **Potent somatostatin analog** $C_{49}H_{66}N_{10}O_{10}S_2$ **Molar Mass:** 1019.24 [79517-01-4] [83150-76-9] (net peptide) Colourless to off-white freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 98 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: H-D-Phe-Cys-Phe-D-Trp-Lys-Thr-Cys-Thr(ol), cyclic disulfide Supplied as acetate salt **Synonymes:** Octreotide acetate; Sandostatin; Sandostatin LAR; SMS 201-995ac; CA index name: L-Cysteinamide, D-phenylalanyl-L-cysteinyl-L-phenylalanyl-D-tryptophyl-L-lysyl-L-threonyl-N-[(1R,2R)-2-hydroxy-1-(hydroxymethyl)propyl]-, cyclic (2→7)-disulfide, acetate (salt) **Literature:** Yumi K. et al. Direct effects of somatostatin analaog octreotide on insulin-like growth factor-I in the aterial wall. Lab Invest. 1997, 76, 329. Okamoto E. et al. Effects of octreotide, a somatostatin analogue, on gastric function evaluated by real-time ultrasonography. Aliment Pharmacol Ther. 1997, 11, 177.	**9750.0001: 1 mg per vial** **9750.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9752	**[Nal^3]Octreotide acetate** **Potent somatostatin analog** $C_{53}H_{68}N_{10}O_{10}S_2$ **Molar Mass:** 1069.30 [848820-27-9] (net peptide) Colourless to off-white freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: H-D-Phe-Cys-1-Nal-D-Trp-Lys-Thr-Cys-Thr-ol, cyclic disulfide **Synonymes:** NOC acetate; CA index name: L-Cysteinamide, D-phenylalanyl-L-cysteinyl-3-(1-naphthalenyl)-L-alanyl-D-tryptophyl-L-lysyl-L-threonyl-N-[(1R,2R)-2-hydroxy-1-(hydroxymethyl)propyl]-, cyclic (2→7)-disulfide **Literature:** no literature reference available	**9752.0001: 1 mg per vial** **9752.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

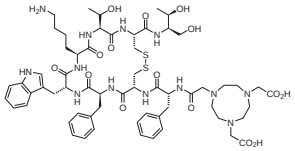
Product Number	Product	Order number / Unit
9760	**TETA-Octreotide acetate** **Precursor for radiolabelled TETA-Octreotide** **Ligand for somatostatin receptors** $C_{67}H_{96}N_{14}O_{17}S_2$ **Molar Mass:** 1433.70 [226084-96-4] (net peptide) Colourless to off-white freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 97 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: TETA-D-Phe-Cys-Phe-D-Trp-Lys-Thr-Cys-Thr(ol), cyclic disulfide TETA = (4,8,11-Triscarboxymethyl-1,4,8,11-tetraaza-cyclotetradec-1-yl)-acetyl Supplied as acetate salt **Synonymes:** TETA-Octreotide; TETA-OC; CA index name: L-Cysteinamide, N-[[4,8,11-tris(carboxymethyl)-1,4,8,11-tetraazacyclotetradec-1-yl]acetyl]-D-phenylalanyl-L-cysteinyl-L-phenylalanyl-D-tryptophyl-L-lysyl-L-threonyl-N-[(1R,2R)-2-hydroxy-1-(hydroxymethyl)propyl]-, cyclic (2→7)-disulfide	**9760.0001: 1 mg per vial** **9760.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

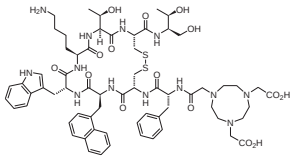
Literature:

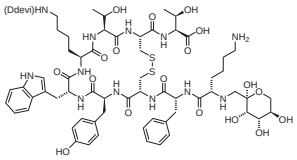
Anderson C.J. et al. ^{64}Cu-TETA-octreotide as a PET imaging agent for patients with neuroendocrine tumors. J Nucl Med. 2001, 42, 213-21.

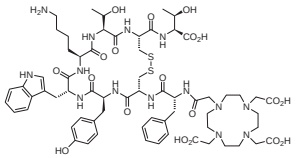
Lewis J.S. et al. Radiotherapy and dosimetry of ^{64}Cu-TETA-Tyr^3-octreotate in a somatostatin receptor-positive, tumor-bearing rat model. Clin Cancer Res. 1999, 5, 3608-16.

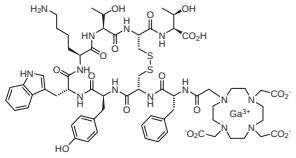
Anderson C.J. et al. Radiotherapy, toxicity and dosimetry of copper-64-TETA-octreotide in tumor-bearing rats. J Nucl Med. 1998, 39, 1944-51.

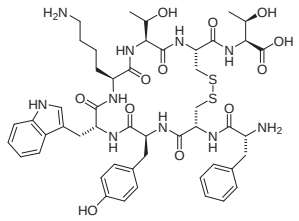
Product Number	Product	Order number / Unit
9762	**NOTA-Octreotide trifluoroacetate** **Precursor for radiolabelled NOTA-Octreotide** $C_{61}H_{85}N_{13}O_{15}S_2$ **Molar Mass:** 1304.50 CAS-RN not yet assigned Colourless to off-white freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: NOTA-D-Phe-Cys-Phe-D-Trp-Lys-Thr-Cys-Thr(ol), cyclic disulfide **Synonymes:** NOTA-octreotide; IMP466 **Literature:** Laverman P. et al. A Novel Facile Method of Labeling Octreotide with ^{18}F-Fluorine. J. Nucl. Med. 2010, 51, 454-461.	**9762.0001: 1 mg per vial** **9762.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

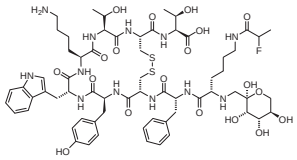
Product Number	Product	Order number / Unit
9765	**NOTA-NOC acetate** **Precursor for radiometal-labelled NOTA-[1-Nal3]octreotide.** $C_{65}H_{87}N_{13}O_{15}S_2$ **Molar Mass:** 1354.6 (net peptide) CAS-RN not yet assigned Colourless to off-white solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: NOTA-D-Phe-Cys-1-Nal-D-Trp-Lys-Thr-Cys-Thr(ol), cyclic disulfide **Synonymes:** L-Cysteinamide, N-[[4,7-bis(carboxymethyl)-1,4,7-triazonan-1-yl]acetyl]-D-phenylalanyl-L-cysteinyl-3-(1-naphthalenyl)-L-alanyl-D-tryptophyl-L-lysyl-L-threonyl-N-[(1R,2R)-2-hydroxy-1-(hydroxymethyl)propyl]-, cyclic (2→7)-disulfide, acetate salt **Literature:** no literature reference available	**9765.0001: 1 mg per vial** **9765.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9771	**Gluc-[Lys^0,Lys(ivDde)^5]-TOCA** **Precursor for Gluc-Lys([^{18}F]FP)-TOCA** $C_{74}H_{104}N_{12}O_{20}S_2$ **Molar Mass:** 1545.82 CAS-RN not yet assigned Colourless to off-white freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: (1-deoxy-D-fructosyl)-Lys-D-Phe-Cys-Tyr-D-Trp-Lys(ivDde)-Thr-Cys-Thr-OH, cyclic disulfide **Synonymes:** (N$^\alpha$-(1-deoxy-D-fructosyl)-[Lys^0-Tyr^3-Lys(Dde)^5]-octreotate; Precursor for [^{18}F]FP-Gluc-TOCA; N-α-(1-deoxy-D-fructosyl)-KfCYw-K(ivDde)-TCT-OH, cyclic C^{2,7}; Gluc-Lys([^{18}F]FP)-TOCA = N$^\alpha$-(1-deoxy-D-fructosyl)-N$^\varepsilon$-(2-[^{18}F]fluoropropionyl)-Lys^0-Tyr^3-octreotate **Literature:** Meisetschlaeger G. et al. Gluc-Lys([^{18}F]FP)-TOCA PET in Patients with SSTR-Positive Tumors: Biodistribution and Diagnostic Evaluation Compared with [^{111}In]DTPA-Octreotide. J. Nucl. Med. 2006, 47, 566-573. Vaidyanathan G. et al. Synthesis and Evaluation of Glycosylated Octreotate Analogues Labeled with Radioiodine and ^{211}At via a Tin Precursor. Bioconjugate Chem. 2006, 17, 195-203.	**9771.0001: 1 mg per vial** **9771.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9772	**DOTA-TATE acetate (GMP)** **Precursor for radiolabelled DOTA-[Tyr^3]octreotate** Manufactured according to GMP requirements for APIs for use in clinical trials (ICH Q7 chapter 19) Sold under license for patent EP1872800 $C_{65}H_{90}N_{14}O_{19}S_2$ **Molar Mass:** 1435.63 [177943-89-4] Colourless to off-white solid packaged in plastic vials **Purity:** > 97 % (9772.0001) > 95 % (9772.0000.05, 9772.0000.10, 9772.0000.25 and 9772.0000.40) **Certificates:** CoA with ESI-MS (identity); HPLC (purity); GC (residual solvents, acetate content, water content); microbiology test **Chemical Name:** DOTA-D-Phe-Cys-Tyr-D-Trp-Lys-Thr-Cys-Thr-OH, cyclic disulfide DOTA = N-[[4,7,10-tris(carboxymethyl)-1,4,7,10-tetraazacyclododec-1-yl]acetyl]- Supplied as acetate salt **Synonymes:** DOTA-[Tyr^3]-Octreotate, DOTA-[Tyr^3, Thr^8]-Octreotide **Literature:** De Jong M. et al. Combination Radionuclide Therapy Using ^{177}Lu- and ^{90}Y-Labeled Somatostatin Analogs. J. Nucl. Med., 2005, 46,13S Valkema R. et al. Long-Term Follow-Up of Renal Function After Peptide Receptor Radiation Therapy with ^{90}Y-DOTA^0,Tyr^3-Octreotide and ^{177}Lu-DOTA^0,Tyr^3-Octreotate. J. Nucl. Med. 2005, 46, 8	**9772.0000.05: 50 μg per vial** **9772.0000.10: 100 μg per vial** **9772.0000.25: 250 μg per vial** **9772.0000.40: 400 μg per vial** **9772.0001: 1 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9773	**Ga-DOTA-TATE** **Reference standard for [^{68}Ga]DOTA-TATE** Sold under license for patent EP1872800 $C_{65}H_{87}GaN_{14}O_{19}S_2$ **Molar Mass:** 1502.32 [777842-51-0] [293295-75-7] [^{68}Ga]DOTA-TATE Colourless freeze-dried solid packaged in dark glass screw cap vials. **Purity:** $\geq$ 97 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** CA index name: Gallate(1-), [N-[[4,7,10-tris[(carboxy-κ O)methyl]-1,4,7,10-tetraazacyclododec-1-yl-κ N1,κ N4,κ N7,κ N10]acetyl-κ O]-D-phenylalanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-L-threonyl-L-cysteinyl-L-threonine cyclic (2→7)-disulfidato(4-)]- **Synonymes:** Ga-DOTATATE; Ga-DOTA-[Tyr^3]octreotate **Literature:** Reubi J.C. and Maecke H.R. Peptide-Based Probes for Cancer Imaging. J. Nucl. Med. 2008, 49, 1735. Fichna J. et al. Synthesis of Target-Specific Radiolabeled Peptides for Diagnostic Imaging. Bioconjugate Chem. 2003, 14, 3.	**9773.0001: 1 mg per vial** **9773.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9774	**[Tyr^3]Octreotate acetate** $C_{49}H_{64}N_{10}O_{12}S_2$ **Molar Mass:** 1049.22 [302794-43-0] (net peptide) Colourless freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: H-D-Phe-Cys-Tyr-D-Trp-Lys-Thr-Cys-Thr-OH, cyclic disulfide **Synonymes:** TATE; TOCA; CA index name: L-Threonine, D-phenylalanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-L-threonyl-L-cysteinyl-, cyclic (2→7)-disulfide **Literature:** Petrou C. et al. Synthesis and sst2 binding profiles of new (Tyr^3)octreotate analogs. J.Peptide Sci. 2008, 14, 725-730. Spyroulias G.A. et al. 3D solution structure of [Tyr^3]octreotate derivatives in DMSO: Structure differentiation of peptide core due to chelate group attachment and biologically active conformation. Med. Chem. 2005, 1, 487-499. Wang Q. et al. Pharmacological properties of hydrophilic and lipophilic derivatives of octreotate. Nucl. Med. Biol. 2004, 31, 21-30.	**9774.0001: 1 mg per vial** **9774.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9778	**Gluc-Lys(FP)-TOCA** **Reference standard for Gluc-Lys([^{18}F]FP)-TOCA** $C_{77}H_{107}FN_{12}O_{21}S_2$ **Molar Mass:** 1619.87 CAS-RN not yet assigned Colourless to off-white freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: (1-deoxy-D-fructosyl)-Lys(2-fluoropropionyl)-D-Phe-Cys-Tyr-D-Trp-Lys-Thr-Cys-Thr-OH, cyclic disulfide **Synonymes:** Glc-Lys^0-fluoropropionyl-TOCA; Glc-Lys^0-fluoropropionyl-Tyr^3-octreotate; [^{19}F]FP-Gluc-TOCA; N$^\alpha$-(1-deoxy-D-fructosyl)-Nε-(2-fluoropropionyl)-[Lys^0-Tyr^3]-octreotate	**9778.0001: 1 mg per vial** **9778.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Meisetschlaeger G. et al. Gluc-Lys([^{18}F]FP)-TOCA PET in Patients with SSTR-Positive Tumors: Biodistribution and Diagnostic Evaluation Compared with [^{111}In]DTPA-Octreotide. J. Nucl. Med. 2006, 47, 566-573.

Vaidyanathan G. et al. Synthesis and Evaluation of Glycosylated Octreotate Analogues Labeled with Radioiodine and ^{211}At via a Tin Precursor. Bioconjugate Chem. 2006, 17, 195-203.

Product Number	Product	Order number / Unit
9782	**ICG-TATE**	**Please inquire for customized filling and bulk quantities.**

$C_{94}H_{112}N_{12}O_{16}S_3$ **Molar Mass:** 1762.16

CAS-RN not yet assigned

Green solid

Purity: $\geq$ 95 %

Certificates:
CoA; MS (identity); HPLC (purity)

Chemical Name:
Sequence: ICG-D-Phe-Cys-Tyr-D-Trp-Lys-Thr-Cys-Thr-OH, cyclic disulfide

Synonymes:
n/a

Literature:

Product Number	Product	Order number / Unit
9790	**Galacto-RGD** **Precursor for [^{18}F]Galacto-RGD**	**9790.0001: 1 mg per vial** **9790.0010: 10 mg per vial** **9790.0050: 50 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_{34}H_{52}N_{10}O_{12}$ **Molar Mass:** 792.84

[922175-70-0] (net peptide)

Colourless to off-white freeze-dried solid packaged in screw cap vials.

Purity: $\geq$ 95 %

Certificates:
CoA; MS (identity); HPLC (purity)

Chemical Name:
Sequence: cyclo[RGDfK(galacto)]
galacto =
(7-amino-2,6-anhydro-7-deoxy-L-glycero-L-galacto-heptonoyl

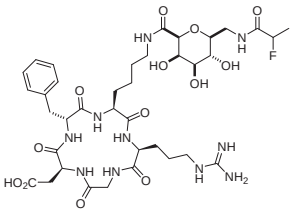
Synonymes:
CA index name: Cyclo[L-arginylglycyl-L-α-aspartyl-D-phenylalanyl-N6-(7-amino-2,6-anhydro-7-deoxy-L-glycero-L-galacto-heptonoyl)-L-lysyl]

Literature:

Haubner R. et al. Non-Invasive Visualization of the Activated avb3 Integrin in Cancer Patients by Positron Emission Tomography and [^{18}F]Galacto-RGD. PloS Medicine 2005, 2, e70.

Haubner R. et al. Noninvasive imaging of avb3 integrin expression using 18F-labeled RGD-containing glycopeptide and positron emission tomography. Cancer Res. 2001, 61, 1781-1785.

Haubner R. et al. [^{18}F]Galacto-RGD : synthesis, radiolabeling, metabolic stability, and radiation dose estimates. Bioconjugate Chem. 2004, 15, 61-69.

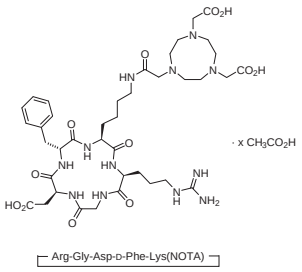
Product Number	Product	Order number / Unit
9800	**Fluoropropionyl-Galacto-RGD** **Reference standard for [^{18}F]Galacto-RGD** $C_{37}H_{55}FN_{10}O_{13}$ **Molar Mass:** 866.89 CAS-RN not yet assigned Colourless to off-white freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: cyclo[RGDfK([^{19}F]galacto)] [^{19}F]galacto = (2,6-anhydro-7-deoxy-7-[[2-fluoro-^{19}F)-1-oxopropyl]amino]-L-glycero-L-galacto-heptonoyl **Synonymes:** Cyclo[L-arginylglycyl-L-α-aspartyl-D-phenylalanyl-N6-[2,6-anhydro-7-deoxy-7-[[2-fluoro-1-oxopropyl]amino]-L-glycero-L-galacto-heptonoyl]-L-lysyl]	**9800.0001: 1 mg per vial** **9800.0010: 10 mg per vial** **9800.0025: 25 mg per vial** **Please inquire for customized filling and bulk quantities.** 

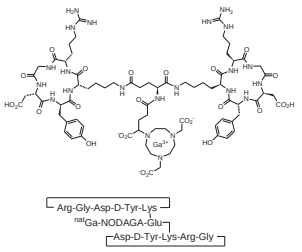
Literature:

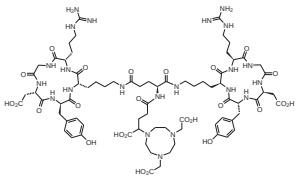
Haubner R. et al. Non-Invasive Visualization of the Activated avb3 Integrin in Cancer Patients by Positron Emission Tomography and [^{18}F]Galacto-RGD. PloS Medicine 2005, 2, e70.

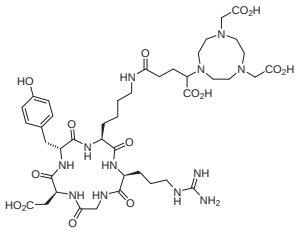
Haubner R. et al. Noninvasive imaging of avb3 integrin expression using 18F-labeled RGD-containing glycopeptide and positron emission tomography. Cancer Res. 2001, 61, 1781-1785.

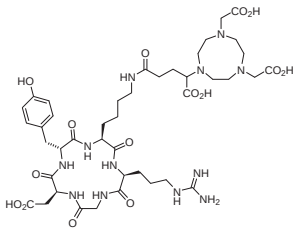
Haubner R. et al. [^{18}F]Galacto-RGD : synthesis, radiolabeling, metabolic stability, and radiation dose estimates. Bioconjugate Chem. 2004, 15, 61-69.

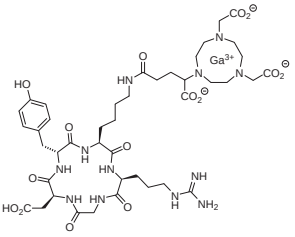
Product Number	Product	Order number / Unit
9802	**NOTA-RGDfK acetate** **Precursor for radiolabelled NOTA-RGDfK.** $C_{39}H_{60}N_{12}O_{12} \cdot x\ CH_3CO_2H$ **Molar Mass:** 888.97 (net peptide) CAS-RN not yet assigned Colourless to off-white freeze-dried solid screw cap vial (plastic) **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: cyclo[-Arg-Gly-Asp-D-Tyr-Lys(NOTA)-] **Synonymes:** n/a **Literature:** no literature reference available	**Please inquire for customized filling and bulk quantities.** 

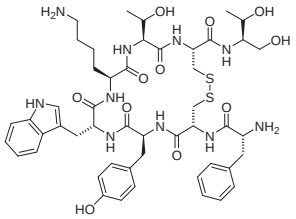
Product Number	Product	Order number / Unit
9803	**Ga-NODAGA-RGD dimer** **Reference standard for ^{68}Ga-NODAGA-RGD dimer** $C_{74}H_{107Ga}N_{22}O_{25}$ **Molar Mass:** 1774.50 (net peptid) CAS-RN not yet assigned Colourless to off-white freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: natGa-NODAGA-Glu(cyclo[-Arg-Gly-Asp-D-Tyr-Lys-]2 **Synonymes:** n/a **Literature:** no literature reference available	**Please inquire for customized filling and bulk quantities.** 

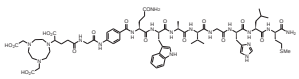
Product Number	Product	Order number / Unit
9804	**NODAGA-RGD dimer acetate** **Precursor for radiolabelled NODAGA-RGD dimer** $C_{74}H_{110}N_{22}O_{25}$ **Molar Mass:** 1707.80 CAS-RN not yet assigned Colourless to off-white freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: NODAGA-Glu(cyclo[-Arg-Gly-Asp-D-Tyr-Lys-]2 **Synonymes:** Cyclo(L-arginylglycyl-L-α-aspartyl-D-tyrosyl-L-lysyl), N6-([[4,7-bis(carboxymethyl)octahydro-1H-1,4,7-triazonin-1-yl]acetyl])-L-glutamoyl]bis- **Literature:** no literature reference available	**9804.0001: 1 mg per vial** **9804.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

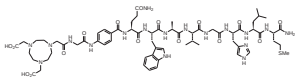
Product Number	Product	Order number / Unit
9805	**NODAGA-RGD trifluoroacetate** **Precursor for radiolabelled RGD peptides** $C_{42}H_{64}N_{12}O_{15}$ **Molar Mass:** 977.03 CAS-RN not yet assigned Colourless to off-white solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: cyclo[-Arg-Gly-Asp-D-Tyr-Lys(NODAGA)-] **Synonymes:** Cyclo[L-arginylglycyl-L-α-aspartyl-D-tyrosyl-N6-([[4,7-bis(carboxymethyl)-1,4,7-triazonan-1-yl]acetyl])-L-lysyl]; NODAGA-RGD **Literature:** no literature reference available	**9805.0001: 1 mg per vial** **9805.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

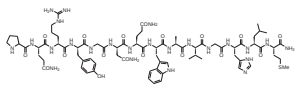
Product Number	Product	Order number / Unit
9806	**NODAGA-RGD (GMP)** **Precursor for radiometal-labelled RGD-peptide.** Manufactured according to GMP requirements for APIs for use in clinical trials (ICH Q7 chapter 19) $C_{42}H_{64}N_{12}O_{15}$ **Molar Mass:** 977.03 CAS-RN not yet assigned Colourless to off-white solid packaged in dark glass screw cap vials. **Purity:** $\geq$ 97 % **Certificates:** CoA with ESI-MS (identity); HPLC (purity); GC (residual solvents, water content) **Chemical Name:** Sequence: cyclo[-Arg-Gly-Asp-D-Tyr-Lys(NODAGA)-] **Synonymes:** Cyclo[L-arginylglycyl-L-α-aspartyl-D-tyrosyl-N6-([[4,7-bis(carboxymethyl)-1,4,7-triazonan-1-yl]acetyl])-L-lysyl]; NODAGA-RGD **Literature:** no literature reference available	**9806.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

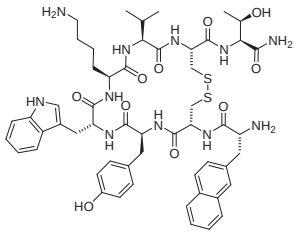
Product Number	Product	Order number / Unit
9807	**Ga-NODAGA-RGD** **Reference standard for ^{68}Ga-NODAGA-RGD** $C_{42}H_{61Ga}N_{12}O_{15}$ **Molar Mass:** 1043.7 CAS-RN not yet assigned White to off-white powder packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: cyclo[-Arg-Gly-Asp-D-Tyr-Lys[NODAGA(Ga)]-] **Synonymes:** Cyclo[L-arginylglycyl-L-α-aspartyl-D-tyrosyl-N6-([[4,7-bis(carboxymethyl)octahydro-1H-1,4,7-triazonin-1-yl]-4-carboxy-butyryl])-L-lysyl], complex with Ga^{3+} **Literature:** no literature reference available	**9807.0001: 1 mg per vial** **9807.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9810	**[Tyr^3]Octreotide acetate** **Potent somatostatin analog** $C_{49}H_{66}N_{10}O_{11}S_2$ **Molar Mass:** 1035.24 [103667-46-5] (net peptide) Colourless to off-white freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 97 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: H-D-Phe-Cys-Tyr-D-Trp-Lys-Thr-Cys-Thr(ol), cyclic disulfide Supplied as acetate salt **Synonymes:** [Tyr^3]-SMS 201-995; CA index name: L-Cysteinamide, D-phenylalanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-L-threonyl-N-[(1R,2R)- 2-hydroxy-1-(hydroxymethyl)propyl]-, cyclic(2→7) disulfide **Literature:** Lamberts S.W.J. et al. The role of somatostatin an its analogs in the diagnosis and treatment of tumors. Endocr. Rev. 1991, 12, 450-482.	**9810.0001: 1 mg per vial** **9810.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9814	**NODAGA-AMBA trifluoroacetate** $C_{67}H_{96}N_{18}O_{18}S$ **Molar Mass:** 1473.7 (net peptide CAS-RN not yet assigned Colourless to off-white solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: NODAGA-Gly-4-Abz-Gln-Trp-Ala-Val-Gly-His-Leu-Met-NH_2 **Synonymes:** NODAGA-AMBA trifluoroacetate; L-Methioninamide, N-[4-carboxy,4-[4,7-bis(carboxymethyl)octahydro-1H-1,4,7-triazonin-1-yl]-butanoyl]glycyl-4-aminobenzoyl-L-glutaminyl-L-tryptophyl -L-alanyl-L-valylglycyl-L-histidyl-L-leucyl-, TFA salt **Literature:** no literature reference available	**9814.0001: 1 mg per vial** **9814.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9815	**NOTA-AMBA trifluoroacetate** $C_{64}H_{92}N_{18}O_{16}S$ **Molar Mass:** 1401.6 (net peptide) CAS-RN not yet assigned Colourless to off-white solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: NOTA-Gly-4-Abz-Gln-Trp-Ala-Val-Gly-His-Leu-Met-NH_2 **Synonymes:** NOTA-AMBA trifluoroacetate; L-Methioninamide, N-[(4,7-Bis-carboxylmethyl-[1,4,7]triazonan-1-yl)-acetyl]glycyl-4-aminobenzoyl-L-glutaminyl-L-tryptophyl -L-alanyl-L-valylglycyl-L-histidyl-L-leucyl-, TFA salt **Literature:** no literature reference available	**9815.0001: 1 mg per vial** **9815.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

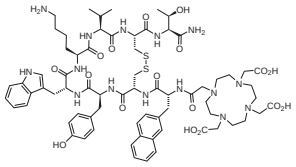
Product Number	Product	Order number / Unit
9816	**[Pro^1,Tyr^4]bombesin (1-14)** **Synthetic GRP receptor ligand.** $C_{74}H_{110}N_{24}O_{18}S \cdot x\ CF_3CO_2H$ **Molar Mass:** 1655.9 (net peptide) [832724-21-7] (net peptide) Colourless to off-white solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: H-Pro-Gln-Arg-Tyr-Gly-Asn-Gln-Trp-Ala-Val-Gly-His-Leu-Met-NH_2 **Synonymes:** [Pro^1,Tyr^4]BN **Literature:** no literature reference available	**Please inquire for customized filling and bulk quantities.** 

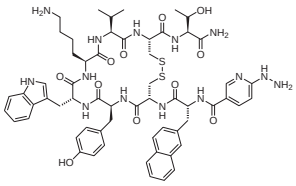
Product Number	Product	Order number / Unit
9820	**Lanreotide trifluoroacetate** **Potent somatostatin agonist, selective for somatostatin receptor subtype 2** $C_{54}H_{69}N_{11}O_{10}S_2$ **Molar Mass:** 1099.33 [108736-35-2] (net peptide) Colourless to off-white freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 97 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: H-D-2-Nal-Cys-Tyr-D-Trp-Lys-Val-Cys-Thr-NH_2, cyclic disulfide **Synonymes:** Angiopeptin; BIM-23014; CA index name: L-Threoninamide, 3-(2-naphthalenyl)-D-alanyl-L-cysteinyl-L-Tyrosyl-D-tryptophyl-L-lysyl-L-valyl-L-cysteinyl-, cyclic (2→7) disulfide, TFA salt	**9820.0001: 1 mg per vial** **9820.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

Shimon I. and Melmed S. Structure and function of somatostatin receptors in growth hormone control. J. Endocrinol. 1997, 155, S3-S6.

Arnold R. et al. Somatostatin analogues in the treatment of endocrine tumours of the gastrointestinal tract. Expert Opin. Pharmacother. 2002, 3, 643-656.

Product Number	Product	Order number / Unit
9831	**DOTA-Lanreotide acetate** **Precursor for radiolabelled DOTA-Lanreotide** **Ligand for somatostatin receptors** $C_{70}H_{95}N_{15}O_{17}S_2$ **Molar Mass:** 1481.7 [213187-44-1] (net peptide) Colourless to off-white freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: DOTA-D-2-Nal-Cys-Tyr-D-Trp-Lys-Val-Cys-Thr-NH_2, cyclic disulfide DOTA = N-[[4,7,10-tris(carboxymethyl)-1,4,7,10-tetraazacyclododec-1-yl]acetyl]- Supplied as acetate salt **Synonymes:** DOTA-BIM-23014; CA index name: L-Threoninamide, 3-(2-naphthalenyl)-N-[[4,7,10-tris(carboxymethyl)-1,4,7,10-tetraazacyclododec-1-yl]acetyl]-D-alanyl-L-cysteinyl-L-Tyrosyl-D-tryptophyl-L-lysyl-L-valyl-L-cysteinyl-, cyclic (2→7) disulfide **Literature:** Smith-Jones P.M. et al. DOTA-Lanreotide: a novel somatostatin analog for tumor diagnosis and therapy. Endocrinology 1999, 140, 5136 - 5148. Banerjee S. et al. ^{177}Lu-DOTA-lanreotide: a novel tracer as a targeted agent for tumor therapy. Nucl. Med. Biol. 2004, 31, 753-759.	**9831.0001: 1 mg per vial** **9831.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9836	**HYNIC-Lanreotide trifluoroacetate** **Precursor for radiolabelled HYNIC-Lanreotide** $C_{60}H_{74}N_{14}O_{11}S_2$ **Molar Mass:** 1231.45 CAS-RN not yet assigned Colourless to off-white freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: HYNIC-D-Phe-Cys-Tyr-D-Trp-Lys(Boc)-Thr-Cys-Thr-NH_2, cyclic disulfide **Synonymes:** L-Threoninamide, 3-(2-naphthalenyl)-N-[(6-hydrazinyl-3-pyridinyl)carbonyl] -D-alanyl-L-cysteinyl-L-Tyrosyl-D-tryptophyl-L-lysyl-L-valyl-L-cysteinyl-, cyclic (2→7) disulfide **Literature:** no literature reference available	**9836.0001: 1 mg per vial** **9836.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9850	**4-Formyl-N,N,N-Trimethylanilinium triflate** **Precursor for 4-[^{18}F]Fluorobenzaldehyde**	**9850.0010: 10 mg per vial** **9850.0100: 100 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_{10}H_{14}NO \cdot CF_3O_3S$ **Molar Mass:** 313.29

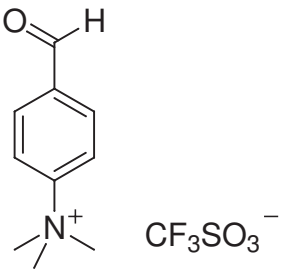
[124915-02-2]

Colourless solid packaged in dark glass crimp cap vials (9850.0010) or screw cap vials (9850.0100).

Purity: $\geq$ 95 %

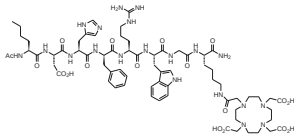
Certificates:
CoA; ^{1}H and ^{19}F NMR spectra

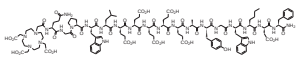
Chemical Name:
CA index names: Benzenaminium, 4-formyl-N,N,N-trimethyl-, 1,1,1-trifluoromethanesulfonate (1:1); Benzenaminium, 4-formyl-N,N,N-trimethyl-, salt with trifluoromethanesulfonic acid (1:1); Methanesulfonic acid, trifluoro-, ion(1-), 4-formyl-N,N,N-trimethylbenzenaminium

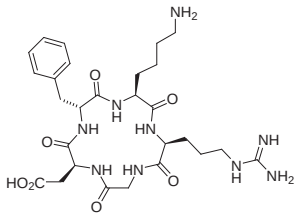


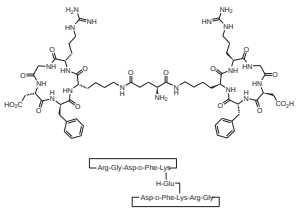
Synonymes:
(4-Formylphenyl)-trimethylammonium trifluoromethanesulfonate; 4-Formyl-N,N,N-trimethylbenzenaminium salt with trifluoromethane-sulfonic acid (1:1); FPTMA

Literature:
Poethko et al. Two Step Methodology for the High Yield Routine Radiohalogenation of Peptides : ^{18}F-labeled RGD and Octreotide Analogs. J. Nucl. Med. 2004, 45, 892-902.

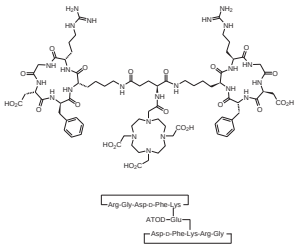
Product Number	Product	Order number / Unit
9855	**DOTA-NAPamide trifluoroacetate** **Precursor for radiolabelled DOTA-NAPamide** $C_{68}H_{100}N_{20}O_{18}$ **Molar Mass:** 1485.65 [935886-72-9] (net peptide) Colourless to off-white freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: Ac-Nle-Asp-His-D-Phe-Arg-Trp-Gly-Lys(DOTA)-NH_2 **Synonymes:** [Nle^4,Asp^5,D-Phe^7, Lys^{11}(DOTA)]-α-MSH(4-11); CA index name: L-Lysinamide, N-acetyl-L-norleucyl-L-α-aspartyl-L-histidyl-D-phenylalanyl-L-arginyl-L-tryptophylglycyl-N6-[2-[4,7,10-tris(carboxymethyl)-1,4,7,10-tetraazacyclododec-1-yl]acetyl]- **Literature:** Froidevaux S. et al. A Gallium-Labeled DOTA-α-Melanocyte-Stimulating Hormone Analog for PET Imaging of Melanoma Metastases. J. Nucl. Med. 2004, 45, 116-123. Froidevaux S. et al. Melanoma Targeting with DOTA-α-Melanocyte-Stimulating Hormone Analogs: Structural Parameters Affecting Tumor Uptake and Kidney Uptake. J. Nucl. Med. 2005, 46, 887-895. Cheng Z. et al. Cu-Labeled α-Melanocyte-Stimulating Hormone Analog for MicroPET Imaging of Melanocortin 1 Receptor Expression. Bioconjugate Chem. 2007, 18, 765-772.	**9855.0001: 1 mg per vial** **9855.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9857	**DOTA-Sargastrin** **Precursor for radiometal-labelled DOTA-Sargastrin** $C_{114}H_{155}N_{25}O_{38}$ **Molar Mass:** 2483.6 CAS-RN not yet assigned Colourless to off-white freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: DOTA-Gln-Gly-Pro-Trp-Leu-Glu-Glu-Glu-Glu-Glu-Ala-Tyr-Gly-Trp-Nle-Asp-Phe-NH_2 **Synonymes:** n/a **Literature:** Laverman P. et al. Comparative biodistribution of 12 ^{111}In-labelled gastrin/CCK2 receptor-targeting peptides. Eur. J. Nucl. Med. Mol. Imaging 2011, 38, 1410 - 1416 Aloj L. et al. Comparison of the binding and internalization properties of 12 DOTA-coupled and 111In-labelled CCK2/gastrin receptor binding peptides: a collaborative project under COST Action BM0607. Eur. J. Nucl. Med. Mol. Imaging 2011, 38, 1417-1425.	**9857.0001: 1 mg per vial** **9857.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9860	**Cyclo-RGDfK** **Integrin targeting sequence.** $C_{27}H_{41}N_9O_7$ **Molar Mass:** 603.67 [161552-03-0] Colourless freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: cyclo[-Arg-Gly-Asp-D-Phe-Lys-] **Synonymes:** Cyclo-RGD **Literature:** Liu S. Radiolabeled Cyclic RGD Peptides as Integrin $\alpha\nu\beta$3 Targeted Radiotracers: Maximizing Binding Affinity via Bivalency. Bioconjugate Chem., 2009, 20, 2199-2213.	**9860.0001: 1 mg per vial** **9860.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9861	**Cyclo-RGDfK dimer trifluoroacetate** **Integrin targeting sequence.** $C_{59}H_{87}N_{19}O_{16}$ **Molar Mass:** 1318.44 [250612-47-6] (net peptide) Colourless freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** CA index name: Cyclo(L-arginylglycyl-L-α-aspartyl-D-phenylalanyl-L-lysyl), 5,5´-L-glutamoylbis- **Synonymes:** Cyclo-RGD dimer **Literature:** Liu S. et al. ^{99m}Tc-Labeling of a Hydrazinonicotinamide-Conjugated Vitronectin Receptor Antagonist Useful for Imaging Tumors. Bioconjugate Chem. 2001, 12, 624-629. Liu S. Radiolabeled Cyclic RGD Peptides as Integrin $\alpha\nu\beta$3 Targeted Radiotracers: Maximizing Binding Affinity via Bivalency. Bioconjugate Chem., 2009, 20, 2199-2213.	**9861.0001: 1 mg per vial** **9861.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9862	**DOTA-RGDfK dimer acetate** **Precursor for radiometal-labelled RGD-peptide.** $C_{75}H_{113}N_{23}O_{23}$ **Molar Mass:** 1704.84 [250612-06-7] (net peptide) Colourless freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** CA index name: Cyclo(L-arginylglycyl-L-α-aspartyl-D-phenylalanyl-L-lysyl), 5,5´-[N-[[4,7,10-tris(carboxymethyl)-1,4,7,10-tetraazacyclododec-1-yl]acetyl]-L-glutamoyl]bis- **Synonymes:** DOTA-RGD dimer	**9862.0001: 1 mg per vial** **9862.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**

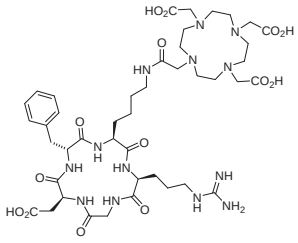


Literature:

Mousa S.A. $\alpha\nu$ Integrin Affinity/Specificity and Antiangiogenesis Effect of a Novel Tetraaza Cyclic Peptide Derivative, SU015, in Various Species. J. Cardiovasc. Pharmacol. 2005, 45, 462-467.

Janssen M.L. et al. Tumor Targeting with Radiolabeled $\alpha\nu\beta_3$ Integrin Binding Peptides in a Nude Mouse Model. Cancer Res. 2002, 62, 6146-6151.

Product Number	Product	Order number / Unit
9863	**DOTA-cyclo(RGDfK) acetate** **Precursor for radiometal-labelled DOTA-RGD.** $C_{43}H_{67}N_{13}O_{14}$ **Molar Mass:** 990.1 (net peptide) [909024-55-1] (net peptide) Colourless to off-white freeze-dried solid packaged in screw cap vials. **Purity:** > 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: cyclo[-Arg-Gly-Asp-D-Phe-Lys(DOTA)-] **Synonymes:** DOTA-RGD	**9863.0001: 1 mg per vial** **9863.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**

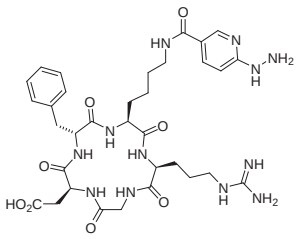


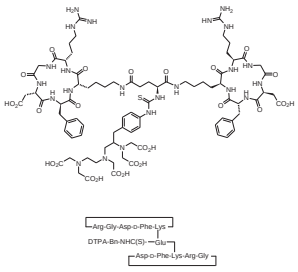
Literature:

Haukkala J. et al. ^{68}Ga-DOTA-RGD peptide: biodistribution and binding into atherosclerotic plaques in mice. Eur. J. Nucl. Med. Mol. Imaging 2009, 36, 2058-2067.

Decristofero C. et al. ^{68}Ga- and ^{111}In-labelled DOTA-RGD peptides for imaging of $\alpha\nu\beta$3 integrin expression. Eur. J. Nucl. Med. Mol. Imaging 2008, 35, 1507-1515.

Yoshimoto M. et al. In Vivo SPECT Imaging with ^{111}In-DOTA-c(RGDfK) to Detect Early Pancreatic Cancer in a Hamster Pancreatic Carcinogenesis Model. J. Nucl. Med. 2012, 53, 765-771.

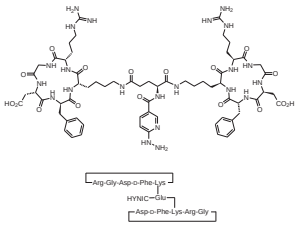
Product Number	Product	Order number / Unit
9864	**HYNIC-cyclo(RGDfK) trifluoroacetate** **Precursor for radiolabelled HYNIC-RGD.** $C_{33}H_{46}N_{12}O_8$ **Molar Mass:** 738.8 (net peptide) [366455-78-9] (net peptide) Colourless to off-white solid packaged in screw cap vials. **Purity:** > 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: cyclo[-Arg-Gly-Asp-D-Phe-Lys(HYNIC)-] **Synonymes:** HYNIC-cyclo-RGD; CA index name: Cyclo[L-arginylglycyl-L-α-aspartyl-D-phenylalanyl-N6-[(6-hydrazinyl-3-pyridinyl)carbonyl]-L-lysyl] **Literature:** no literature reference available	**9864.0001: 1 mg per vial** **9864.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9866	**DTPA-Bn-cyclo(RDGfK) dimer trifluoroacetate** **Precursor for $\alpha_v\beta_3$ integrin targeted, radiometal-labelled RGD-peptides** $C_{81}H_{115}N_{23}O_{26}S$ (net peptide) **Molar Mass:** 1859.0 (net peptide) [1004322-97-7] White to off-white powder packaged in plastic vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: DTPA-Bn-cyclo(-Arg-Gly-Asp-D-Phe-Lys-) dimer **Synonymes:** CA index name: Cyclo(L-arginylglycyl-L-α-aspartyl-D-phenylalanyl-L-lysyl), 5,5'-[N-[[[4-[2-[bis(carboxymethyl)amino]-3-[[2-[bis(carboxymethyl)amino]ethyl](carboxymethyl)amino]propyl]phenyl]amino]thioxomethyl]-L-glutamoyl]bis- **Literature:** Jia B. et al. Linker Effects on Biological Properties of ^{111m}In-Labeled DTPA Conjugates of a Cyclic RGDfK Dimer. Bioconjugate Chem. 2008, 19: 201-210.	**9866.0001: 1 mg per vial** **9866.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9867	**HYNIC-cyclo(RGDfK) dimer trifluoroacetate** **Precursor for $\alpha_v\beta_3$ integrin targeted, ^{99m}Tc-labelled RGD-peptides**	**9867.0001: 1 mg per vial** **9867.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**

$C_{65}H_{92}N_{22}O_{17}S_2$ **Molar Mass:** 1453.6 (net peptide)
[500166-11-0]

Colourless to off-white solid packaged in dark glass screw cap vials.



Purity: $\geq$ 95 %

Certificates:
CoA; MS (identity); HPLC (purity)

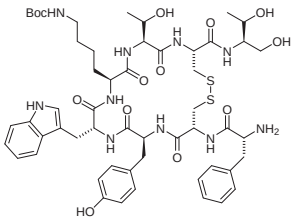
Chemical Name:
Sequence: Hynic-cyclo(-Arg-Gly-Asp-D-Phe-Lys-) dimer

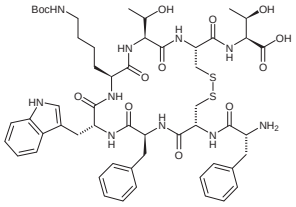
Synonymes:
CA index name:
Cyclo(L-arginylglycyl-L-α-aspartyl-D-phenylalanyl-L-lysyl),
5,5'-[N-[(6-hydrazino-3-pyridinyl)carbonyl]-L-glutamoyl]bis-

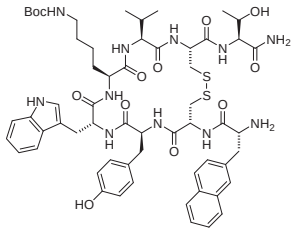
Literature:

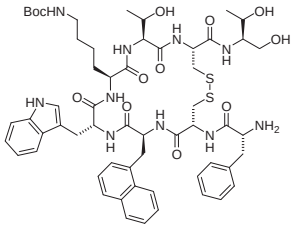
Jia B. et al. ^{99m}Tc-Labeled Cyclic RGDfK Dimer: Initial Evaluation for SPECT Imaging of Glioma Integrin $\alpha\nu\beta_3$ Expression. Bioconjugate Chem. 2006, 17, 1069-1076.

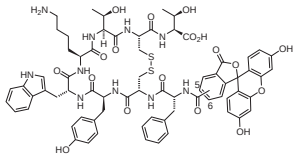
Janssen M.L. et al. Tumor Targeting with Radiolabeled $\alpha\nu\beta_3$ Integrin Binding Peptides in a Nude Mouse Model. Cancer Res. 2002, 62, 6146-6151.

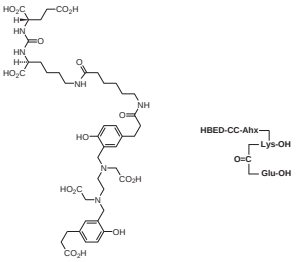
Product Number	Product	Order number / Unit
9900	**[Tyr^3,Lys^5(Boc)]octreotide acetate** **Precursor for N-terminal substituted octreotide analogs** $C_{54}H_{74}N_{10}O_{13}S_2$ **Molar Mass:** 1135.36 [147790-89-4] (net peptide) Colourless freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: H-D-Phe-Cys-Tyr-D-Trp-Lys(Boc)-Thr-Cys-Thr-ol, cyclic disulfide **Synonymes:** [Lys(Boc)^5]TOC; CA index name: L-Cysteinamide, D-phenylalanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-N6-[(1,1-dimethylethoxy)carbonyl]-L-lysyl-L-threonyl-N-[(1R,2R)-2-hydroxy-1-(hydroxymethyl)propyl]-, cyclic (2→7)-disulfide **Literature:** no literature reference available	**9900.0001: 1 mg per vial** **9900.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9901	**[Lys^5(Boc)]octreotate acetate** **Precursor for N-terminal substituted octreotate analogs** $C_{49}H_{64}N_{10}O_{11}S_2$ **Molar Mass:** 1133.34 [133304-78-6] (net peptide) Colourless freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: H-D-Phe-Cys-Phe-D-Trp-Lys(Boc)-Thr-Cys-Thr-OH, cyclic disulfide **Synonymes:** CA index name: L-Threonine, D-phenylalanyl-L-cysteinyl-L-phenylalanyl-D-tryptophyl-N6-[(1,1-dimethylethoxy)carbonyl]-L-lysyl-L-threonyl-L-cysteinyl-, cyclic (2→7)-disulfide **Literature:** no literature reference available	**9901.0001: 1 mg per vial** **9901.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

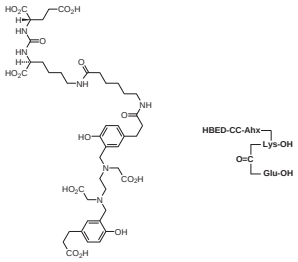
Product Number	Product	Order number / Unit
9902	**[Lys^5(Boc)]lanreotide acetate** **Precursor for N-terminal substituted lanreotide analogs** $C_{59}H_{77}N_{11}O_{12}S_2$ **Molar Mass:** 1196.44 [182482-12-8] (net peptide) Colourless to off-white freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: H-D-2-Nal-Cys-Tyr-D-Trp-Lys(Boc)-Val-Cys-Thr-NH_2, cyclic disulfide **Synonymes:** [Lys^5(Boc)]lanreotide; CA index name: L-Threoninamide, 3-(2-naphthalenyl)-D-alanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-N6-[(1,1-dimethylethoxy)carbonyl]-L-lysyl-L-valyl-L-cysteinyl-, cyclic (2→7)-disulfide **Literature:** no literature reference available	**9902.0001: 1 mg per vial** **9902.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9903	**[Nal^3,Lys^5(Boc)]octreotide acetate** **Precursor for N-terminal substituted [Nal^3]octreotide analogs** $C_{58}H_{76}N_{10}O_{12}S_2$ **Molar Mass:** 1169.42 CAS-RN not yet assigned Colourless to off-white freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: H-D-Phe-Cys-1-Nal-D-Trp-Lys(Boc)-Thr-Cys-Thr-ol, cyclic disulfide **Synonymes:** [Nal^3,Lys^5(Boc)]octreotide; L-Cysteinamide, D-phenylalanyl-L-cysteinyl-3-(1-naphthalenyl)-L-alanyl-D-tryptophyl-N6-[(1,1-dimethylethoxy)carbonyl]-L-lysyl-L-threonyl-N-[(1R,2R)-2-hydroxy-1-(hydroxymethyl)propyl]-, cyclic (2→7)-disulfide **Literature:** no literature reference available	**9903.0001: 1 mg per vial** **9903.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9908	**5(6)-FAM-TATE** **fluorescent dye-labelled somatostatin receptor agonist.** **5(6)-FAM = 5(6)-carboxyfluorescein (mixture of regioisomers)** $C_{70}H_{74}N_{10}O_{18}S_2$ **Molar Mass:** 1407.5 (net peptide) CAS-RN not yet assigned Dark-orange freeze-dried solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: 5(6)-FAM-D-Phe-Cys-Tyr-D-Trp-Lys-Thr-Cys-Thr-OH, cyclic disulfide. **Synonymes:** 5(6)-FAM-TOCA; FAM-[Tyr^3]octreotate; **Literature:** no literature reference available	**Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9919	**PSMA-11 (GMP)** **Precursor for [^{68}Ga]GaPSMA-11** **PSMA: prostate-specific membrane antigen** Manufactured according to GMP requirements for APIs for use in clinical trials (ICH Q7 chapter 19) $C_{44}H_{62}N_6O_{17} \cdot x\ CF_3CO_2H$ **Molar Mass:** 947.0 (net peptide) [1366302-52-4] Colourless to off-white solid packaged in 2-necked plastic vials (reaction vessel) with combi stoppers for LuerLock **Purity:** $\geq$ 96 % **Certificates:** CoA with ESI-MS and NMR (identity); HPLC (purity) ; GC (residual solvents); microbiology test **Chemical Name:** CA index name: 4,6,12,19-Tetraazadocosane-1,3,7-tricarboxylic acid, 22-[3-[[[2-[[[5-(2-carboxyethyl)-2-hydroxyphenyl]methyl](carboxymethyl)amino]ethyl](carboxymethyl)amino]methyl]-4-hydroxyphenyl]-5,13,20-trioxo-, (3S,7S)-, supplied as trifluoroacetate salt **Synonymes:** PSMA^{HBED}; Glu-CO-Lys(Ahx)-HBED-CC; Glu-NH-CO-NH-Lys(Ahx)-HBED-CC; 2-[3-(1-Carboxy-5-6-[3-(3-[(2-[5-(2-carboxy-ethyl)-2-hydroxy-benzyl]-carboxymethyl-amino-ethyl)-carboxymethyl-amino]-methyl-4-hydroxy-phenyl)-propionylamino]-hexanoylamino- **Literature:** Eder M. et al. 68Ga-Complex Lipophilicity and the Targeting Property of a Urea-Based PSMA Inhibitor for PET Imaging. Bioconjugate Chem. 2012, 23, 688-697.	**Please inquire for customized filling and bulk quantities.** 

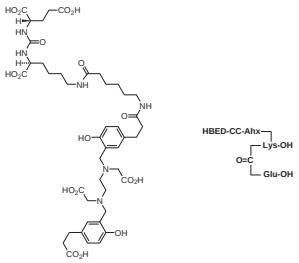
Product Number	Product	Order number / Unit
9920	**PSMA-11** **Precursor for [^{68}Ga]GaPSMA-11** **PSMA: prostate-specific membrane antigen** $C_{44}H_{62}N_6O_{17} \cdot x\ CF_3CO_2H$ **Molar Mass:** 947.0 (net peptide) [1366302-52-4] Colourless to off-white solid packaged in dark glass screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** CA index name: 4,6,12,19-Tetraazadocosane-1,3,7-tricarboxylic acid, 22-[3-[[[2-[[[5-(2-carboxyethyl)-2-hydroxyphenyl]methyl](carboxymethyl)amino]ethyl](carboxymethyl)amino]methyl]-4-hydroxyphenyl]-5,13,20-trioxo-, (3S,7S)-, supplied as trifluoroacetate salt **Synonymes:** PSMA^{HBED}; Glu-CO-Lys(Ahx)-HBED-CC; Glu-NH-CO-NH-Lys(Ahx)-HBED-CC; 2-[3-(1-Carboxy-5-6-[3-(3-[(2-[5-(2-carboxy-ethyl)-2-hydroxy-benzyl]-carboxymethyl-amino-ethyl)-carboxymethyl-amino]-methyl-4-hydroxy-phenyl)-propionylamino]-hexanoylamino- **Literature:** Eder M. et al. Novel Preclinical and Radiopharmaceutical Aspects of [^{68}Ga]Ga-PSMA-HBED-CC: A New PET Tracer for Imaging of Prostate Cancer. Pharmaceuticals. 2014, 7, 779-796. Eder M. et al. 68Ga-Complex Lipophilicity and the Targeting Property of a Urea-Based PSMA Inhibitor for PET Imaging. Bioconjugate Chem. 2012, 23, 688-697.	**9920.0000.5: 0.5 mg per vial** **9920.0001: 1 mg per vial** **Please inquire for customized filling and bulk quantities.**



Product Number	Product	Order number / Unit
9921	**PSMA-11 (GMP)**	

Precursor for [^{68}Ga]GaPSMA-11
PSMA: prostate-specific membrane antigen

Please inquire for customized filling and bulk quantities.



Manufactured according to GMP requirements for APIs for use in clinical trials (ICH Q7 chapter 19)

$C_{44}H_{62}N_6O_{17} \cdot x\ CF_3CO_2H$ **Molar Mass:** 947.0 (net peptide)

[1366302-52-4]

Colourless to off-white solid packaged in plastic vials

Purity: $\geq$ 96 %

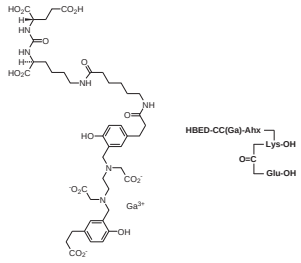
Certificates:
CoA with ESI-MS and NMR (identity); HPLC (purity) ; GC (residual solvents); heavy metals content (ICP-MS); microbiology test

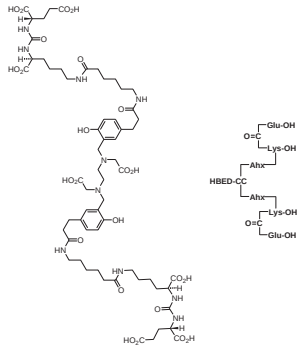
Chemical Name:
CA index name: 4,6,12,19-Tetraazadocosane-1,3,7-tricarboxylic acid, 22-[3-[[[2-[[[5-(2-carboxyethyl)-2-hydroxyphenyl]methyl](carboxymethyl)amino]ethyl](carboxymethyl)amino]methyl]-4-hydroxyphenyl]-5,13,20-trioxo-, (3S,7S)-, supplied as trifluoroacetate salt

Synonymes:
PSMA^{HBED}; Glu-CO-Lys(Ahx)-HBED-CC;
Glu-NH-CO-NH-Lys(Ahx)-HBED-CC;
2-[3-(1-Carboxy-5-6-[3-(3-[(2-[5-(2-carboxy-ethyl)-2-hydroxy-benzyl]-carboxymethyl-amino-ethyl)-carboxymethyl-amino]-methyl-4-hydroxy-phenyl)-propionylamino]-hexanoylamino-

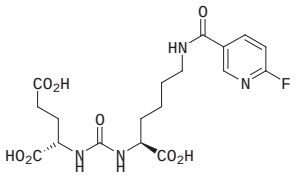
Literature:
Eder M. et al. Novel Preclinical and Radiopharmaceutical Aspects of [^{68}Ga]Ga-PSMA-HBED-CC: A New PET Tracer for Imaging of Prostate Cancer. Pharmaceuticals. 2014, 7, 779-796.

Eder M. et al. 68Ga-Complex Lipophilicity and the Targeting Property of a Urea-Based PSMA Inhibitor for PET Imaging. Bioconjugate Chem. 2012, 23, 688-697.

Product Number	Product	Order number / Unit
9922	**GaPSMA-11** **Reference standard for [^{68}Ga]GaPSMA-11** **PSMA: prostate-specific membrane antigen** $C_{44}H_{59Ga}N_6O_{17}$ **Molar Mass:** 1013.69 CAS-RN not yet assigned Colourless to off-white solid packaged in screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Glu-CO-Lys(Ahx)-[Ga(HBED-CC)] **Synonymes:** Ga-PSMA^{HBED} **Literature:** Eder M. et al. Novel Preclinical and Radiopharmaceutical Aspects of [^{68}Ga]Ga-PSMA-HBED-CC: A New PET Tracer for Imaging of Prostate Cancer. Pharmaceuticals. 2014, 7, 779-796. Eder M. et al. 68Ga-Complex Lipophilicity and the Targeting Property of a Urea-Based PSMA Inhibitor for PET Imaging. Bioconjugate Chem. 2012, 23, 688-697.	**Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9923	**PSMA-10** **Precursor for [^{68}Ga]GaPSMA-10** **PSMA: prostate-specific membrane antigen** $C_{62}H_{92}N_{10}O_{24} \cdot x\ CF_3CO_2H$ **Molar Mass:** 1361.45 (net peptide) CAS-RN not yet assigned Colourless to off-white solid packaged in dark glass screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** [Glu-ureido-Lys(Ahx)]2-HBED-CC, supplied as trifluoroacetate salt **Synonymes:** PSMA$_2$HBED; Glu-CO-Lys(Ahx)-HBED-CC-(Ahx)Lys-CO-Glu **Literature:** Schäfer M. et al. A dimerized urea-based inhibitor of the prostate-specific membrane antigen for 68Ga-PET imaging of prostate cancer. EJNMMI Research 2012, 2, 23.	**Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9925	**DCFPyL reference standard** **Reference standard for [^{18}F]DCFPyL** **2-(3-1-carboxy-5-[(6-[^{18}F]fluoro-pyridine-3-carbonyl)-amino]-pentyl-ureido)-pentanedioic acid**	**9925.0005: 5 mg per vial** **9925.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.**



Research Chemical
The tracer [^{18}F]DCFPyL is patent-protected in some countries, please consider to inquire for PSMA-1007 compounds (ID 9943, 99433) instead, that are provided by ABX under exclusive licence.

$C_{18}H_{23}FN_4O_8$ **Molar Mass:** 442.40

[1423758-00-2]

Colourless to off-white solid packaged in dark glass screw cap vials.

Purity: $\geq$ 95 %

Certificates:
CoA; ^{1}H and ^{19}F NMR spectra (identity); HPLC (purity)

Chemical Name:
2-(3-1-carboxy-5-[(6-fluoro-pyridine-3-carbonyl)-amino]-pentyl-ureido)-pentanedioic acid

Synonymes:
[^{18}F]DCFPyL standard; 2-(3-1-Carboxy-5-[(6-fluoro-pyridine-3-carbonyl)-amino]-pentyl-ureido)-pentanedioic acid

Literature:

Chen Y. et al. 2-(3-1-Carboxy-5-[(6-[^{18}F]Fluoro-Pyridine-3-Carbonyl)-Amino]-Pentyl-Ureido)-Pentanedioic Acid, [^{18}F]DCFPyL, a PSMA-Based PET Imaging Agent for Prostate Cancer. Clin. Cancer. Res. 2011, 17, 7645-7653.

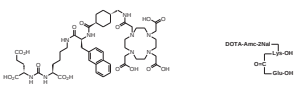
Szabo Z. et al. Initial Evaluation of [^{18}F]DCFPyL for Prostate-Specific Membrane Antigen (PSMA)-Targeted PET Imaging of Prostate Cancer. Mol. Imaging Biol. 2015, 17, 565-574.

Rowe S.P. et al. Imaging of metastatic clear cell renal cell carcinoma with PSMA-targeted ^{18}F-DCFPyL PET/CT. Ann. Nucl. Med. 2015, 29, 877-882.

Rowe S.P. et al. Detection of ^{18}F-FDG PET/CT occult lesions with ^{18}F-DCFPyL PET/CT in a patient with metastatic renal cell carcinoma. Clin. Nucl. Med. 2016, 41, 83-85.

Dietlein M. et al. Comparison of [^{18}F]DCFPyL and [^{68}Ga]Ga-PSMA-HBED-CC for PSMA-PET Imaging in Patients with Relapsed Prostate Cancer. Mol. Imaging Biol. 2015, 17, 575-584.

Product Number	Product	Order number / Unit
9933	**PSMA-617** **Precursor for [^{68}Ga/^{177}Lu/^{90}Y]PSMA-617** **PSMA: prostate-specific membrane antigen**	**Please inquire for customized filling and bulk quantities.**



$C_{49}H_{71}N_9O_{16}$ **Molar Mass:** 1042.1 (net peptide)

CAS-RN not yet assigned

Colourless to off-white solid packaged in dark glass screw cap vials.

Purity: $\geq$ 95 %

Certificates:
CoA; MS (identity); HPLC (purity)

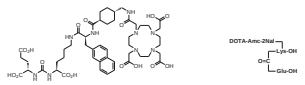
Chemical Name:

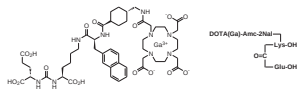
Synonymes:
2-[3-(1-Carboxy-5-3-naphthalen-2-yl-2-[(4-[2-(4,7,10-tris-carboxymethyl-1,4,7,10-tetraaza-cyclododec-1-yl)-acetylamino]-methyl-cyclohexanecarbonyl)-amino]-propionylamino-pentyl)-ureido]-pentanedioic acid

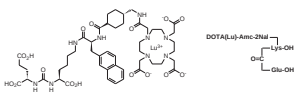
Literature:

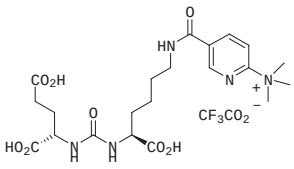
Kratochwil C. et al. [^{177}Lu]Lutetium-labelled PSMA ligand-induced remission in a patient with metastatic prostate cancer. Eur. J. Nucl. Med. Mol. Imaging. 2015, 42, 987-988.

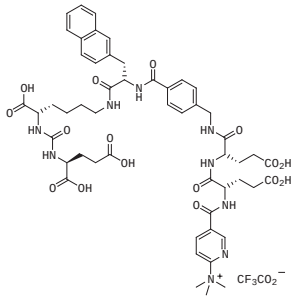
Benesova M. et al. Preclinical Evaluation of a Tailor-Made DOTA-Conjugated PSMA Inhibitor with Optimized Linker Moiety for Imaging and Endoradiotherapy of Prostate Cancer. J. Nucl. Med. 2015, 56, 914-920.

Product Number	Product	Order number / Unit
9934	**PSMA-617 (GMP)** **Precursor for [^{68}Ga/^{177}Lu/^{90}Y]PSMA-617** **PSMA: prostate-specific membrane antigen** Manufactured according to GMP requirements for APIs for use in clinical trials (ICH Q7 chapter 19) $C_{49}H_{71}N_9O_{16}$ **Molar Mass:** 1042.1 (net peptide) CAS-RN not yet assigned Colourless to off-white solid packaged in plastic vials **Purity:** $\geq$ 98 % **Certificates:** CoA with ESI-MS and NMR (identity); HPLC (purity) ; GC (residual solvents); heavy metals content (ICP-MS); microbiology test **Chemical Name:** **Synonymes:** 2-[3-(1-Carboxy-5-3-naphthalen-2-yl-2-[(4-[2-(4,7,10-tris-carboxymethyl-1,4,7,10-tetraaza-cyclododec-1-yl)-acetylamino]-methyl-cyclohexanecarbonyl)-amino]-propionylamino-pentyl)-ureido]-pentanedioic acid **Literature:** Kratochwil C. et al. [^{177}Lu]Lutetium-labelled PSMA ligand-induced remission in a patient with metastatic prostate cancer. Eur. J. Nucl. Med. Mol. Imaging. 2015, 42, 987-988. Benesova M. et al. Preclinical Evaluation of a Tailor-Made DOTA-Conjugated PSMA Inhibitor with Optimized Linker Moiety for Imaging and Endoradiotherapy of Prostate Cancer. J. Nucl. Med. 2015, 56, 914-920.	**Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9935	**GaPSMA-617** **Reference standard for [68Ga]GaPSMA-617** $C_{49}H_{68Ga}N_9O_{16}$ x CF_3CO_2H **Molar Mass:** 1108.8 (net. peptide) CAS-RN not yet assigned Colourless to off-white solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** GaPSMA-617 **Synonymes:** natGa-PSMA-617 **Literature:** Benesova M. et al. Preclinical Evaluation of a Tailor-Made DOTA-Conjugated PSMA Inhibitor with Optimized Linker Moiety for Imaging and Endoradiotherapy of Prostate Cancer. J. Nucl. Med. 2015, 56, 914-920.	**9935.0001: 1 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9936	**LuPSMA-617** **Reference Standard for [^{177}Lu]LuPSMA-617** $C_{49}H_{68Lu}N_9O_{16}$ · x CF_3CO_2H **Molar Mass:** 1214.1 (net peptide) CAS-RN not yet assigned Colourless to off-white solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** **Synonymes:** n/a **Literature:** Kratochwil C. et al. [^{177}Lu]Lutetium-labelled PSMA ligand-induced remission in a patient with metastatic prostate cancer. Eur. J. Nucl. Med. Mol. Imaging. 2015, 42, 987-988. Benesova M. et al. Preclinical Evaluation of a Tailor-Made DOTA-Conjugated PSMA Inhibitor with Optimized Linker Moiety for Imaging and Endoradiotherapy of Prostate Cancer. J. Nucl. Med. 2015, 56, 914-920.	**Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9941	**deprotected DCFPyL precursor** **Precursor for [^{18}F]DCFPyL** **2-(3-1-carboxy-5-[(6-[^{18}F]fluoro-pyridine-3-carbonyl)-amino]-pentyl-ureido)-pentanedioic acid** Research Chemical The tracer [^{18}F]DCFPyL is patent-protected in some countries, please consider to inquire for PSMA-1007 compounds (ID 9943, 99433) instead, that are provided by ABX under exclusive licence. $C_{23}H_{32}F_3N_5O_{10}$ **Molar Mass:** 595.52 CAS-RN not yet assigned Colourless to off-white solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum (identity); HPLC (purity) **Chemical Name:** 5-((S)-5-carboxy-5-(3-((S)-1,3-dicarboxypropyl)ureido)pentylcarbamoyl)-N,N,N-trimethylpyridin-2-aminium 2,2,2-trifluoroacetate **Synonymes:** deprotected [^{18}F]DCFPyL precursor; 5-((S)-5-carboxy-5-(3-((S)-1,3-dicarboxypropyl)ureido)pentylcarbamoyl)-pyridin-2-yl-trimethylammonium 2,2,2-trifluoroacetate **Literature:** Chen Y. et al. 2-(3-1-Carboxy-5-[(6-[^{18}F]Fluoro-Pyridine-3-Carbonyl)-Amino]-Pentyl-Ureido)-Pentanedioic Acid, [^{18}F]DCFPyL, a PSMA-Based PET Imaging Agent for Prostate Cancer. Clin. Cancer. Res. 2011, 17, 7645-7653. Szabo Z. et al. Initial Evaluation of [^{18}F]DCFPyL for Prostate-Specific Membrane Antigen (PSMA)-Targeted PET Imaging of Prostate Cancer. Mol. Imaging Biol. 2015, 17, 565-574. Rowe S.P. et al. Imaging of metastatic clear cell renal cell carcinoma with PSMA-targeted ^{18}F-DCFPyL PET/CT. Ann. Nucl. Med. 2015, 29, 877-882. Rowe S.P. et al. Detection of ^{18}F-FDG PET/CT occult lesions with ^{18}F-DCFPyL PET/CT in a patient with metastatic renal cell carcinoma. Clin. Nucl. Med. 2016, 41, 83-85. Dietlein M. et al. Comparison of [^{18}F]DCFPyL and [^{68}Ga]Ga-PSMA-HBED-CC for PSMA-PET Imaging in Patients with Relapsed Prostate Cancer. Mol. Imaging Biol. 2015, 17, 575-584.	**9941.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9943	**PSMA-1007 precursor** **Precursor for [^{18}F]PSMA-1007** **PSMA: prostate-specific membrane antigen** Research Chemical $C_{54}H_{64}F_3N_9O_{18}$ **Molar Mass:** 1184.13 CAS-RN not yet assigned Colourless to off-white solid packaged in dark glass crimp cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H NMR spectrum (identity); HPLC (purity) **Chemical Name:** 5-((S)-4-carboxy-1-((S)-4-carboxy-1-(4-((S)-1-((S)-5-carboxy-5-(3-((S)-1,3-dicarboxypropyl)ureido)pentylamino)-3-(naphthalen-2-yl)-1-oxopropan-2-ylcarbamoyl)benzylamino)-1-oxobutan-2-ylamino)-1-oxobutan-2-ylcarbamoyl)-N,N,N-trimethylpyridin-2-aminium 2,2,2-trifluoroacetate **Synonymes:** deprotected [^{18}F]PSMA-1007 precursor; Glu-CO-Lys(2Nal-Amb-Glu-Glu-PyTMA); EuK(2Nal-Amb-Glu-Glu-PyTMA); 5-((S)-4-carboxy-1-((S)-4-carboxy-1-(4-((S)-1-((S)-5-carboxy-5-(3-((S)-1,3-dicarboxypropyl)ureido)pentylamino)-3-(naphthalen-2-yl)-1-oxopropan-2-ylcarbamoyl)benzylamino)-1-oxobutan-2-ylamino)-1-oxobutan-2-ylcarbamoyl)-pyridin-2-yl-trimethylammonium 2,2,2-trifluoroacetate	**9943.0003: 3 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Literature:

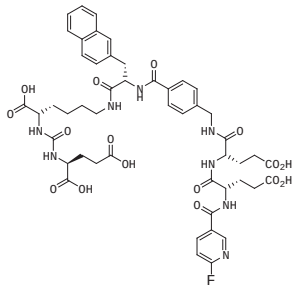
Giesel F.L. et al. 18F-*PSMA-1007* PET/CT Detects Micrometastases in a Patient With Biochemically Recurrent Prostate Cancer. Clin. Genitourin. Cancer. 2016. doi: 10.1016/j.clgc.2016.12.029.

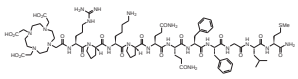
Giesel F.L. F-18 labelled *PSMA-1007*: biodistribution, radiation dosimetry and histopathological validation of tumor lesions in prostate cancer patients. Eur. J. Nucl. Med. Mol. Imaging 2017, 44(4), 678-688. doi: 10.1007/s00259-016-3573-4.

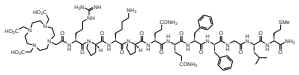
Cardinale J. et al. Preclinical Evaluation of [^{18}F]PSMA-1007: A New PSMA-Ligand for Prostate Cancer Imaging. J. Nucl. Med. 2016. doi: 10.2967/jnumed.116.181768

Giesel F.L. et al. ^{18}F-Labelled PSMA-1007 shows similarity in structure, biodistribution and tumour uptake to the theragnostic compound PSMA-617. Eur. J. Nucl. Med. Biol. 2016, 43, 1929-30.

Kesch C. et al. Intra-individual comparison of ^{18}F-PSMA-1007-PET/CT, multi-parametric MRI and radical prostatectomy specimen in patients with primary prostate cancer - a retrospective, proof of concept study. J Nucl Med. 2017 doi: 10.2967/jnumed.116.18923

Product Number	Product	Order number / Unit
99433	**PSMA-1007 reference standard** **Reference Standard for [^{18}F]PSMA-1007** Research Chemical $C_{49}H_{55}FN_8O_{16}$ **Molar Mass:** 1031.00 CAS-RN not yet assigned Colourless to off-white solid packaged in dark glass screw cap vials. **Purity:** > 95 % **Certificates:** CoA; ^{1}H and ^{19}F NMR spectra (identity); HPLC (purity) **Chemical Name:** (3S,10S,14S)-1-(4-(((S)-4-carboxy-2-((S)-4-carboxy-2-(6-fluoronicotinamido)butanamido)butanamido)methyl)phenyl)-3-(naphthalen-2-ylmethyl)-1,4,12-trioxo-2,5,11,13-tetraazahexadecane-10,14,16-tricarboxylic acid **Synonymes:** [^{18}F]PSMA-1007 standard **Literature:** Giesel F.L. et al. 18F-*PSMA-1007* PET/CT Detects Micrometastases in a Patient With Biochemically Recurrent Prostate Cancer. Clin. Genitourin. Cancer. 2016. doi: 10.1016/j.clgc.2016.12.029. Giesel F.L. F-18 labelled *PSMA-1007*: biodistribution, radiation dosimetry and histopathological validation of tumor lesions in prostate cancer patients. Eur. J. Nucl. Med. Mol. Imaging 2017, 44(4), 678-688. doi: 10.1007/s00259-016-3573-4. Cardinale J. et al. Preclinical Evaluation of [^{18}F]PSMA-1007: A New PSMA-Ligand for Prostate Cancer Imaging. J. Nucl. Med. 2016. doi: 10.2967/jnumed.116.181768 Giesel F.L. et al. ^{18}F-Labelled PSMA-1007 shows similarity in structure, biodistribution and tumour uptake to the theragnostic compound PSMA-617. Eur. J. Nucl. Med. Biol. 2016, 43, 1929-30. Kesch C. et al. Intra-individual comparison of ^{18}F-PSMA-1007-PET/CT, multi-parametric MRI and radical prostatectomy specimen in patients with primary prostate cancer - a retrospective, proof of concept study. J Nucl Med. 2017 doi: 10.2967/jnumed.116.18923	**99433.0005: 5 mg per vial** **99433.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9960	**DOTA-Substance P** **Precursor for radiometal-labelled neurokinin receptor targeted peptides** $C_{79}H_{124}N_{22}O_{20} \cdot x\ CH_3CO_2H<$ **Molar Mass:** 1734.0 (net peptide) CAS-RN not yet assigned Colourless to off-white solid packaged in dark glass screw cap vials. **Purity:** ≥ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: DOTA-Arg-Pro-Lys-Pro-Gln-Gln-Phe-Phe-Gly-Leu-Met-NH_2, supplied as acetate salt **Synonymes:** $N^{2.1}$-[[4,7,10-tris(carboxymethyl)-1,4,7,10-tetraazacyclododec-1-yl]acetyl]-L-arginyl-L-prolyl-L-lysyl-L-prolyl-L-glutaminyl-L-glutaminyl-L-phenylalanyl-L-phenylalanyl-glycyl-L-leucyl-L-methionine amide **Literature:** De Araújo E.B. Radiolabeling of substance p with lutetium-177 and biodistribution study in rat pancreatic tumor xenografted nude mice. Cell. Mol. Biol. 2010, 56, 12-17.	**9960.0001: 1 mg per vial** **9960.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

Product Number	Product	Order number / Unit
9960	**DOTA-Substance P** **Precursor for radiometal-labelled neurokinin receptor targeted peptides** $C_{79}H_{124}N_{22}O_{20} \cdot x\ CH_3CO_2H$< **Molar Mass:** 1734.0 (net peptide) CAS-RN not yet assigned Colourless to off-white solid packaged in dark glass screw cap vials. **Purity:** $\geq$ 95 % **Certificates:** CoA; MS (identity); HPLC (purity) **Chemical Name:** Sequence: DOTA-Arg-Pro-Lys-Pro-Gln-Gln-Phe-Phe-Gly-Leu-Met-NH_2, supplied as acetate salt **Synonymes:** $N^{2.1}$-[[4,7,10-tris(carboxymethyl)-1,4,7,10-tetraazacyclododec-1-yl]acetyl]-L-arginyl-L-prolyl-L-lysyl-L-prolyl-L-glutaminyl-L-glutaminyl-L-phenylalanyl-L-phenylalanyl-glycyl-L-leucyl-L-methionine amide **Literature:** De Araújo E.B. Radiolabeling of substance p with lutetium-177 and biodistribution study in rat pancreatic tumor xenografted nude mice. Cell. Mol. Biol. 2010, 56, 12-17.	**9960.0001: 1 mg per vial** **9960.0010: 10 mg per vial** **Please inquire for customized filling and bulk quantities.** 

CAS-RN Index

List of Chemical Abstracts Registry Numbers for all catalogue entries.
Substances with no CAS-RN yet assigned are listed at the end.

CAS Number	Product Number	Name
[1000816-92-1]	2921	Di-THP-nosyl-AUR
[1000875-21-7]	7012	TMSnBG
[1003005-81-9] ([^{18}F]Fluoro-propargyl-triethylene glycol)	6308	Fluoro-propargyl-triethylene glycol
[1004322-97-7]	9866	DTPA-Bn-cyclo(RDGfK) dimer trifluoroacetate
[1005325-42-7]	1652	PBR28 precursor
[1007840-96-1]	2421	Fluoroethyl-Carfentanil hydrochloride
[1016545-04-2]	4402	(2S,3S)-N-Boc-carboxylreboxetine
[1016545-13-3] (free base)	4405	Methylreboxetinecarboxylate
[102034-49-1] (free base)	1311	6-Fluoro-D,L-DOPA hydrochloride
[1027785-95-0] [1040397-47-4] [^{68}Ga]DOTA-NOC	9717	Ga-DOTA-NOC
[1031370-96-3]	3571	FPEB precursor
[103667-46-5] (net peptide)	9810	[Tyr^3]Octreotide acetate
[103694-84-4]	7210	Copper tetraMIBI tetrafluoroborate $[Cu(MIBI)_4]BF_4$
[103694-84-4]	7211	Copper tetraMIBI tetrafluoroborate (GMP)
[103725-47-9]	7100	S-Benzoyl-MAG-3
[103935-47-3]	6182	2-Bromoethyl triflate
[104676-71-3]	7220	Zinc-TBI
[105018-14-2]	4406	(2S,3S)-Methylreboxetine
[106114-42-5]	1591	Fluoroethylspiperone
[106-93-4]	6175	Dibromoethane
[107188-74-9]	1540	FLB 457
[107188-87-4]	1522	Epidepride
[107794-71-8]	1119	MBBTG
[108-01-0]	6100	Dimethylaminoethanol
[108736-35-2] (net peptide)	9820	Lanreotide trifluoroacetate
[1089194-09-1]	4399	FBEM standard
[109434-22-2]	7200	MIBI
[1095267-89-2]	1654	FEPPA precursor
[1095267-90-5]	1655	FEPPA standard
[111555-57-8]	2810	N-Methylnaltrindole
[1119249-30-7]	6305	Tosyl-propargyl-diethylene glycol
[112501-53-8]	1180	DMTr-lyxothymidine
[113158-34-2] [105618-26-6] (free base)	4500	Norbinaltorphimine dihydrochloride
[113310-87-5]	1501	(R)-O-Desmethylraclopride hydrobromide
[113310-88-6]	1500	(S)-O-Desmethylraclopride hydrobromide
[113544-40-4]	1117	Glucose Triflate
[113981-16-1]	1820	Nitro-Setoperone
[114077-01-9]	1369	OMFD
[114435-86-8]	6194	Fluoromethyl tosylate
[115017-61-3] [478-76-2] (free base)	1477	(R)-(-)-Norapomorphine hydrobromide
[115134-32-2]	2342	S-[^{11}C]-AIB precursor
[115134-32-2] (S-AIB-precursor)	2340	rac [^{11}C]-AIB precursor
[1159940-23-4]	1335	Nucleophilic F-L-DOPA precursor
[1161009-63-7]	4397	FPyKYNE
[1161009-68-2]	4396	[^{18}F]FPyKYNE precursor
[1161260-63-4] ([^{18}F]DFEAN)	5010	DFEAN
[116784-70-4]	2580	GB 67

[116784-78-2]	2570	GB 99
[1187551-69-4]	2051	3-O-Trityl-6-O-desmethyl-phenethyl-orvinol
[119670-11-0]	1510	(S)-O-Desmethylraclopride
[1215091-03-4] (free base)	6532	5-FEHTP hydrochloride
[1217443-99-6] [73445-63-3] (free base)	1466	SCH-23388 hydrochloride
[1217462-17-3] [135556-21-7] (free base)	1462	(S)-SCH-24518 hydrochloride
[122551-95-5]	1330	4-O-Pivaloyl-L-DOPA
[122769-71-5]	1329	4-O-Pivaloyl-L-DOPA Hydrochloride
[122799-38-6]	1260	2′-Fluoro-thymidine
[123931-31-7]	5620	(-)-Norverapamil
[1242003-07-1] (water free compound)	7284	PrP9
[124236-61-9]	1640	(R,S)-N-Desmethyl PK11195
[1246547-53-4]	7034	MFBG hydrochloride
[124915-01-1]	4385	CPTMA
[124915-02-2]	9850	4-Formyl-N,N,N-Trimethylanilinium triflate
[124915-06-6]	4391	FB precursor
[125341-24-4]	1490	(+)-NNC112
[125941-87-9]	1464	SCH-23390 hydrochloride
[1261156-59-5] (free base)	1337	6-Nitro-L-DOPA hydrogensulfate
[126766-32-3]	2070	GR 89696 fumarate
[126766-43-6]	2071	(R)-(-)-GR103545 fumarate
[126766-48-1]	2062	Normethylcarbamoyl-GR 89696
[127502-06-1]	7310	Tetrofosmin
[127648-30-0]	4020	(-)-2-beta-Carbomethoxy-3-beta-(4-fluorophenyl)nortropane
[128145-75-5]	1460	(R)-SCH-24518 hydrochloride
[1283095-64-6]	2450	(S)-FPSPPA
[1283095-67-9]	2460	(R)-FPSPPA
[1283095-70-4]	2470	(S)-Methyl-FPSPPA
[1283095-73-7]	2480	(R)-Methyl-FPSPPA
[128584-73-6]	1590	N-Mesitylenesulfonyloxy-ethyl-spiperone
[128600-22-6]	1530	FLB 604
[13100-46-4]	1131	1,2,3,4-Tetra-O-acetyl-beta-D-glucopyranose
[132059-12-2]	2590	(S)-1-(2-Amino-3-nitrophenoxy)-3-tert-butylamino-propan-2-ol
[132-17-2]	4231	Benztropine Mesylate
[13292-45-0]	5700	N-Demethylrifampicin
[133066-70-3]	2760	FNMB
[133081-26-2]	7080	Succinimidyl-N-Boc-Hynic
[133081-27-3] [167639-20-5] (free base)	7090	Succinimidyl-Hynic hydrochloride
[133304-78-6] (net peptide)	9901	[Lys^{5}(Boc)]octreotate acetate
[135382-47-7]	1521	Tin-epidepride precursor
[135416-43-2]	4030	(-)-2-beta-Carbomethoxy-3-beta-(4-iodophenyl)tropane
[13551-89-8]	1410	Fluoromisonidazole
[13551-92-3]	1420	Desmethylmisonidazole
[1366302-52-4]	9919	PSMA-11 (GMP)
[1366302-52-4]	9920	PSMA-11
[1366302-52-4]	9921	PSMA-11 (GMP)
[136794-87-1]	4050	(-)-2-beta-Carbomethoxy-3-beta-(4-iodophenyl)nortropane
[136794-88-2]	4041	TBS-CT
[137076-50-7]	7301	DOTAEt

[137564-70-6]	2850	Benzyl-14-(R,S)-tosyloxy-6-thiaheptadecanoate
[137564-72-8]	2860	14-(R,S)-Fluoro-6-thiaheptadecanoic acid
[138661-02-6] (net peptide)	9740	Pentreotide trifluoroacetate
[138685-99-1]	1261	3-N-Boc-5′-O-dimethoxytrityl-3′-fluorothymidine
[1391711-43-5]	4172	TEO-PE2I
[1392498-16-6]	5149	6-O-Tosyloxyethyl-CBT
[139290-65-6]	1850	MDL100907
[139290-65-6] (free base)	1870	MDL100907 tartrate salt
[139290-69-0]	1860	MDL100151
[139418-53-4]	1800	Nitro-Altanserin
[141663-88-9]	1918	FDHT standard
[141664-05-3]	1916	FDHT precursor
[141807-58-1]	4140	beta-CIT acid
[1421915-93-6]	3353	(-)-Flubatine precursor
[1421915-93-6]	3354	(-)-Flubatine precursor (GMP)
[1423758-00-2]	9925	DCFPyL reference standard
[14255-61-9]	7161	HMDP
[14260-82-3]	1222	3′-Iodo-thymidine
[1429-50-1]	7165	EDTMP
[143188-51-6]	1681	Desmethylazidomazenil
[143412-40-2]	2510	(S)-Desisopropylcarazolol
[143412-41-3]	2500	(R)-Desisopropylcarazolol
[14344-48-0]	7250	EC
[14344-58-2] [121251-02-3] (free base)	7260	ECD
[14357-78-9]	2020	Diprenorphine
[143773-92-6] (free base)	7010	MTMSBG
[143993-89-9]	1320	DiBoc-Iodo-L-DOPA
[143993-90-2]	1300	6-Trimethylstannyl-L-DOPA
[144334-59-8]	1310	6-Fluoro-L-DOPA hydrochloride
[14521-98-3	2052	Phenethyl-orvinol
[1456877-71-6]	3371	ASEM precursor
[146474-00-2]	4398	FBEM precursor
[146629-34-7]	2948	5-Trimethylstannyl-2′-deoxyuridine
[146714-76-3]	3230	Desmethyl-WAY 100634
[146714-97-8]	3210	WAY 100635
[146715-34-6]	3220	Desmethyl-WAY100635
[146725-33-9]	4180	Nor-beta-CCIT
[14685-79-1]	1110	ClDG
[147790-81-6] (net peptide)	9744	DTPA-TOC trifluoroacetate
[147790-89-4] (net peptide)	9900	[Tyr^3,Lys^5(Boc)]octreotide acetate
[148613-10-9]	3100	N-Trifluoroacetyl-5-acetoxy-2-trimethylstannyl-phenylalanine ethyl ester
[148613-12-1]	3130	2-Fluoro-m-Tyrosine
[148702-73-2]	1880	SB206453
[148702-73-2]	1881	SB206453 (GMP)
[148702-79-8]	1882	SB207145
[149183-89-1]	4733	(±)-9-O-Desmethyl-tetrabenazine
[150133-21-4]	2072	(S)-(+)-GR89696 fumarate
[150196-34-2]	1400	NITTP
[150196-34-2]	1401	NITTP (GMP)
[150196-34-2]	1402	NITTP (GMP)
[150519-28-1]	6030	Desmethyl-Rolipram

[150804-39-0]	6520	Dimethyl-8-phenylsulfonyl-5-phenylsulfonyloxy-hexahydropyrrolo[2,3]indol-1,2-dicarboxylate
[153215-70-4]	4610	(-)-FEBV
[153215-71-5]	4600	(-)-TEBV
[153436-54-5]	5210	PD 153035
[154361-50-9]	2953	Xeloda
[155204-26-5]	3250	MPPF
[155204-27-6]	3240	Nitro-MPPF
[155204-28-7]	3200	WAY 100634
[155797-99-2]	4130	CITFP
[155798-01-9]	4110	CITFE
[157809-85-3]	1600	(R)-N-Desmethyl PK11195
[157809-86-4]	1620	(S)-N-Desmethyl PK11195
[157891-91-3]	2030	3-O-Trityl-diprenorphine
[157891-92-4]	2000	3-O-Trityl-6-O-desmethyl-diprenorphine
[157891-93-5]	2055	3-O-Trityl-6-O-desmethyl-buprenorphine
[158111-10-5]	4040	TMS-CT
[159701-28-7]	1592	D-threo-N-NPS-Ritalinic acid
[160388-33-0]	1928	FFNP standard
[160754-76-7]	3550	CNS 5161
[160754-78-9]	3540	Desmethyl-CNS 5161
[1613520-76-5]	5150	[^{18}F]Lansoprazole Precursor
[161370-66-7]	3191	(S)-tert-Butyl 2-((tert-butoxycarbonyl) amino)-4-Iodobutanoat
[161532-22-5]	2800	3-O-Benzyl-naltrindole
[161552-03-0]	9860	Cyclo-RGDfK
[163714-99-6]	1430	FETNIM precursor
[166173-74-6]	1550	Tosyl-Fallypride
[166173-78-0]	1560	Fallypride
[166173-81-5]	1580	Desmethoxyfallypride
[16709-25-4]	6510	α-Methyl-L-tryptophan
[167548-65-4] (free base)	4360	(+)-McN 5652 Thiobutyrate
[16808-86-9]	2010	Diprenorphine hydrochloride
[168266-51-1]	3530	GR 205171 Dihydrochloride
[168266-90-8]	3510	GR 205171
[16853-85-3]	801	Lithium Aluminium Hydride in THF bulk
[16853-85-3]	802	Lithium aluminium hydride (0.1 M in THF)
[16853-85-3]	803	Lithium aluminium hydride (0.25 M in THF)
[16853-85-3]	804	Lithium aluminium hydride (0.05 M in THF)
[16853-85-3]	832	Lithium aluminium hydride (0.1 M in THF)
[170465-14-2]	1370	N-Trifluoroacetyl-3,4-dimethoxy-6-trimethylstannyl-phenethylamine
[170953-68-1]	1371	N-Trifluoroacetyl-3,4-di-tert-butoxycarbonyloxy-6-trimethylstannyl-phenethylamine
[171720-95-9]	2874	L-FEAU
[173039-10-6]	9510	PMPA
[17351-62-1]	808	Tetrabutylammonium Hydrogen Carbonate (0.075 M) - Aqueous solution, stabilized with ethanol
[174618-11-2]	1138	Me-4-FDG precursor
[177714-21-5]	1900	MMSE
[17773-10-3]	6170	Choline iodide
[177943-89-4]	9772	DOTA-TATE acetate (GMP)
[178804-18-7]	5100	6-OH-BTA-0
[178804-18-7]	5101	6-OH-BTA-0 (GMP)
[179756-59-3]	3270	MPT

[180045-77-6]	4100	CITFES
[18037-10-0]	2873	Bis(trimethylsilyl)cytosine
[180468-34-2]	4210	Altropane
[180468-34-2] (free base)	4211	Altropane hydrochloride
[180574-25-8]	3500	Desmethyl-GR 205171
[182482-12-8] (net peptide)	9902	[Lys^{5}(Boc)]lanreotide acetate
[186022-53-7]	2390	Desmethylcarfentanil acid
[186381-39-5] (free base)	4122	CITTP Tosylate
[188112-92-7]	3700	Desmethyl-SCH-442416
[188680-65-1]	4165	PE2I tin precursor
[188680-71-9]	4170	PE2I
[189192-18-5]	1840	MDL105725
[189950-11-6] (free base)	7400	TRODAT
[191474-13-2]	1210	Anhydrothymidine-FLT precursor
[19262-68-1]	1593	D-threo-Methylphenidate hydrochloride
[19263-21-9]	6183	2-Bromoethyl tosylate
[194086-61-8]	4910	Chlorothiadiazine
[1984-15-2]	7160	MDP
[199470-02-5]	2061	(R)-(+)-Normethylcarbamoyl-GR 103545
[199734-70-8]	1453	2,3,5,6-Tetrafluorophenyl-2-(2-nitroimidazol-1-yl)acetate
[199800-19-6]	1454	N-(2-Fluoroethyl)-2-(2-nitroimidazol-1-yl)acetamide
[200557-18-2]	3751	CPFPX
[203398-46-3]	1342	TriBoc-L-DOPA ethyl ester
[204318-14-9]	9702	DOTATOC (GMP)
[204777-78-6]	9500	Fmoc-Lys(ivDde)-OH
[204977-05-9]([^{18}F]FETNIM)	1440	FETNIM
[205934-45-8]	1609	(S)-PK 11195
[205934-46-9]	1610	(R)-PK11195
[206067-83-6]	2970	FHBG
[206067-84-7]	2960	Tosyl-FHBG
[209530-92-7]	3320	Nitro-AP
[209530-93-8] (free base)	3340	FAP tartrate
[213136-14-2]	2890	FTAU
[213187-44-1] (net peptide)	9831	DOTA-Lanreotide acetate
[21373-30-8]	1332	6-Hydroxy-D,L-DOPA
[213764-92-2]	3310	IAP
[213766-21-3]	3300	TAP
[216867-99-1] (net peptide)	9600	Ubiquicidin (29-41) acetate
[219638-33-2] (cation)	2958	5-Fluorouracil precursor
[219859-83-3]	2130	Propionic acid piperidin-4-yl ester hydrochloride
[220793-03-3]	1451	1-(5-Deoxy-5-fluoro-α-D-arabinofuranosyl)-2-nitroimidazole
[221132-62-3]	1480	(+)-Desmethyl-NNC112
[223463-90-9] (free base)	3071	D-FET hydrochloride
[223699-69-2]	4390	PMBAB
[22423-26-3]	1250	2,2′-Anhydrothymidine
[226084-96-4] (net peptide)	9760	TETA-Octreotide acetate
[233766-75-1]	3350	TMA-AP
[23418-85-1]	6301	1-Tosyloxy-3-butyne
[23745-86-0]	6210	Potassium fluoroacetate
[23978-09-8]	800	Cryptand 222
[24124-59-2]	6177	Bis(tosyloxy)methane
[2438-57-5]	2320	cis-4-Fluoro-L-proline

[24493-89-8]	3400	MHED hydrochloride
[250612-06-7] (net peptide)	9862	DOTA-RGDfK dimer acetate
[250612-47-6] (net peptide)	9861	Cyclo-RGDfK dimer trifluoroacetate
[2507-61-1]	2330	trans-4-Fluoro-L-proline
[252570-31-3]	4407	(2S,3S)-Desethylreboxetine
[25297-82-9]	6179	1,2-Bis(nosyloxy)ethane
[253307-72-1]	1653	PBR28 standard
[2536-36-9]	7600	16-Iodohexadecanoic acid
[25526-93-6]	1219	FLT Ultra Pure
[25526-93-6]	1220	3′-Fluoro-thymidine (FLT)
[257943-19-4] (net peptide)	9721	HYNIC-TOC trifluoroacetate
[259145-56-7] [103729-16-4] (free base)	4370	(+)-McN 5652
[259739-01-0]	5020	DMEAN
[259739-02-1]	5000	DMTEAN
[260992-21-0]	2060	(S)-(-)-Normethylcarbamoyl-GR 103545
[262352-33-0] [103729-13-1] (free base)	4380	(-)-McN 5652
[262598-97-0]	3520	Desmethyl-GR 205171 Dihydrochloride
[281667-94-5]	4190	FECNT
[28404-87-7]	4230	Norbenztropine
[28508-20-5]	6141	Bromocholine bromide
[290371-75-4]	1200	Dimethoxybenzyl-FLT precursor
[293295-66-6]	9704	Y-DOTA-TOC
[293295-70-2]	9703	Ga-DOTA-TOC acetate
[294-90-6]	7290	Cyclen
[295330-61-9]	5200	Desmethyl-PD 153035
[296774-10-2]	4300	MASB
[296774-10-2]	4301	MASB (GMP)
[30193-04-5]	1459	NiATSM
[302794-43-0] (net peptide)	9774	[Tyr^3]Octreotate acetate
[3056-17-5]	2954	2′,3′-Didehydro-3′-deoxythymidine
[31077-88-0]	1120	FDM
[31077-89-1]	1130	ACY-FDG
[311351-26-5]	4160	PE2I acid
[31167-05-2]	2871	5-Ethyl-2,4-bis[(trimethylsilyl)oxy]pyrimidine
[312-68-5]	6190	3-Fluoropropyltosylate
[31501-19-6]	2950	2′-Deoxy-L-uridine
[316173-57-6]	3710	SCH-442416
[31828-68-9]	2210	L-Homocysteine thiolactone hydrochloride
[319002-53-4]	4900	Aminothiadiazine
[321835-55-6] ([^{177}Lu]-DOTA-TOC)	9705	Lu-DOTA-TOC
[33125-97-2]	1770	(R)-Etomidate
[33402-03-8]	3390	Metaraminol bitartrate
[335104-67-1]	4200	Altropane acid
[335104-67-1] (Altropane acid free amine)	4201	Altropane acid hydrochloride
[336881-26-6]	2880	FTRU
[339091-18-8]	2869	2-O-(Trifluoromethylsulfonyl)-1,3,5-tri-O-benzoyl-α-L-ribofuranose
[341032-67-5]	7020	CNS 1261
[34168-77-9] pyranoside [4536-08-7] open-chain	1108	6-Deoxy-6-fluoro-D-glucopyranose
[344791-53-3] (free base)	7014	SGMIB Standard

[344791-59-9]	7015	SGMIB Precursor
[3466-75-9]	4730	(±)-α-Dihydrotetrabenazine
[347148-59-8]	6050	(R)-(-)-Desmethyl-Rolipram
[347148-60-1]	6040	(S)-(+)-Desmethyl-Rolipram
[348-67-4]	2229	D-Methionine
[366455-78-9] (net peptide)	9864	HYNIC-cyclo(RGDfK) trifluoroacetate
[38176-02-2]	5630	(+)-Verapamil hydrochloride
[383-50-6]	6184	2-Fluoroethyl tosylate
[39794-75-7]	6200	Ethyl (p-tosyloxy)acetate
[398497-81-9]	4150	2-FE-beta-CIT
[400885-40-7]	3000	N,O-Di-Boc-2-TMSn-L-tyrosine ethyl ester
[40968-70-5]	6173	DMMB
[41107-56-6]	2940	3′-Fluoro-2′,3′-dideoxyuridine
[42567-91-9]	1328	3,4-Di-O-Pivaloyl-L-DOPA
[4298-17-3]	3190	3-Iodo-α-methyl-p-tyrosine
[43036-17-5]	5130	6-MeO-BTA-0
[432038-21-6] (free base)	4381	(+)-Fluoromethyl-McN 5652
[442-51-3]	1755	Harmine
[444717-20-8]	1190	DMTr-Nosyl-lyxothymidine
[444717-23-1]	1240	3-N-Boc-5′-O-dimethoxytrityl-3′-O-nosyl-thymidine
[444717-23-1]	1241	3-N-Boc-5′-O-dimethoxytrityl-3′-O-nosyl-thymidine (GMP)
[445379-33-9]	1926	FFNP precursor
[454-29-5]	2205	D,L-Homocysteine
[459424-38-5]	6130	Fluoromethylcholine chloride
[4724-56-5]	6185	Bis(tosyl)-1,4-butanediol
[478037-15-9]	3050	TET
[478037-15-9]	3051	TET (GMP)
[478037-15-9]	3052	TET (GMP)
[478173-67-0]	3750	CPTPX
[479407-07-3]	6120	Fluoroethylcholine tosylate
[479407-08-4]	6160	Fluoroethylcholine chloride
[479642-48-3]	4132	TBSCT-FP
[481052-68-0] (free base)	3081	(L)-HET hydrochloride
[487-03-6]	1753	Harmol
[494775-35-8]	1450	1-(2,3-Diacetyl-5-tosyl-(α-D-arabinofuranosyl)-2-nitroimidazole
[500166-11-0]	9867	HYNIC-cyclo(RGDfK) dimer trifluoroacetate
[50370-56-4]	4000	(-)-2-beta-Carbomethoxy-3-beta-(4-fluorophenyl)tropane
[50372-80-0]	4060	(-)-2-beta-Carbomethoxy-3-beta-(phenyl)tropane
[50-89-5]	1290	Thymidine
[51570-69-5] (CMTMA cation)	4386	CMTMA
[5220-98-4]	4700	(±)-9-O-Desmethyl-α-dihydrotetrabenazine
[5221-18-1]	3035	Thyronamine Hydrochloride
[52331-22-3]	6181	2-Bromoethyl nosylate
[53152-21-9]	2056	Buprenorphine hydrochloride
[53786-10-0]	2700	4-(2-Keto-3-methyl-1-benzimidazolinyl)piperidine
[54-42-2]	2949	IUdR
[54-49-9]	3380	Metaraminol (free base)
[5460-83-3]	1452	N-(2-Tosyloxyethyl)phthalimide
[5469-66-9]	6191	1,3-Propane-di-tosylate
[55612-21-0]	2922	FIRU
[56343-01-2]	7312	Disodium sulfosalicylate
[566169-93-5]	5140	6-OH-BTA-1 (free base)

[566170-03-4]	5110	6-MOMO-BTA-0
[566170-03-4]	5111	6-MOMO-BTA-0 (GMP)
[56632-83-8]	2930	FAC
[56649-48-0]	1780	(R)-Desethyl-Etomidate
[56649-49-1]	1782	(S)-Desethyl-Etomidate
[57775-29-8]	2540	(R,S)-Carazolol
[58-46-8]	4732	(±)-Tetrabenazine
[58931-63-8]	2120	Acetic acid 1-methyl-piperidin-4-yl ester hydrochloride
[58966-93-1]	7281	TACN
[590365-47-2]	5030	DMFEAN
[593287-40-2] (net peptide)	9715	DOTA-[Pro^{1},Tyr^{4}]bombesin (1-14)
[59-51-8]	2230	D,L-Methionine
[60168-37-8]	6174	BHTMEDA
[60239-18-1]	7300	DOTA
[6027-13-0]	2200	L-Homocysteine
[61413-54-5]	6000	Rolipram
[619300-53-7] (net peptide)	9712	DOTA-NOC acetate
[619300-53-7] (net peptide)	9716	DOTA-NOC acetate (GMP)
[62-74-8]	6211	Sodium fluoroacetate
[627490-01-1]	4310	DASB
[627490-01-1]	4311	DASB (GMP)
[627490-40-8] (free base)	4330	AFM standard
[6315-52-2]	6180	1,2-Bis(tosyloxy)ethane
[6337-59-3]	6186	1,4-Bis(tosyloxy)but-2-yne
[63618-91-7]	1455	ATSM
[63-68-3]	2220	L-Methionine
[6398-74-9]	7111	(Benzoylmercapto)acetic acid
[640749-61-7]	4394	FPyME standard
[640749-64-0]	4393	[^{18}F]FPyBrA/[^{18}F]FPyME precursor
[64219-77-8]	2140	Propionic acid 1-methyl-piperidin-4-yl ester hydrochloride
[65717-97-7]	7060	Disofenin
[6581-06-2]	2830	QNB
[660845-84-1]	4389	TBAB
[66134-67-6]	4392	SFB
[66392-64-1]	1760	(R)-Metomidate hydrochloride
[66392-65-2]	1762	(S)-Metomidate hydrochloride
[66516-09-4]	7110	MAG 3
[67018-85-3]	5600	Norverapamil
[673-68-7]	1456	PTSM
[67-48-1]	6150	Choline chloride
[676437-17-5]	1721	Tosyloxyethylflumazenil
[676437-19-7] ([^{18}F]FFMZ)	1730	Fluoroethylflumazenil
[676596-40-0]	7270	TFP-N-sucDf-Fe
[68341-09-3]	1457	CuATSM
[68844-77-9]	5165	Astemizole
[69123-94-0]	2900	FAU
[69123-98-4]	2910	FIAU
[69256-17-3]	2878	FMAU
[70838-44-7]	1230	5′-O-Benzoyl-2,3′-anhydrothymidine
[70838-44-7]	1231	5′-O-Benzoyl-2,3′-anhydrothymidine (GMP)
[71144-39-3]	1380	6-Fluorodopamine
[713135-14-9]	1570	Tosyl-Desmethoxyfallypride

[71861-83-1]	2840	Me-QNB
[721937-56-0] (net peptide)	9714	AMBA acetate
[7226-39-3]	1150	FDGal
[7288-28-0]	2872	5-Methyl-2,4-bis[(trimethylsilyl)oxy]pyrimidine
[72955-96-5]	2511	(R,S)-Desisopropylcarazolol
[73736-50-2]	5166	O-Desmethyl Astemizole
[74-95-3]	6176	Dibromomethane
[754988-84-6]	4400	(2S,3S)-N-Boc-norethylreboxetine
[76330-71-7]	1810	Altanserin
[765890-24-2]	7030	TBS-CNS 1261
[76911-01-8]	6303	1-Tosyloxy-5-hexyne
[77758-50-0]	6302	1-Tosyloxy-4-pentyne
[777842-51-0] [293295-75-7] [^{68}Ga]DOTA-TATE	9773	Ga-DOTA-TATE
[78266-06-5]	7050	Mebrofenin
[784-71-4]	2920	FUdR
[78709-81-6]	3010	2-Fluoro-tyrosine
[78755-81-4]	1710	Flumazenil
[78853-38-0]	3020	2-Iodo-tyrosine
[78859-33-3]	2530	(S)-Carazolol
[78859-34-4]	2520	(R)-Carazolol
[788824-64-6]	3036	3-Iodothyronamine Hydrochloride
[78887-70-4]	831	Pentadecylmagnesium bromide 0.5 M in diethyl ether
[79089-72-8]	1700	Desmethylflumazenil
[79465-83-1]	6500	Dimethyl-8-acetyl-hexahydropyrrolo[2,3]indol-1,2-dicarboxylate
[79517-01-4] [83150-76-9] (net peptide)	9750	Octreotide acetate
[832724-21-7] (net peptide)	9816	[Pro^{1},Tyr^{4}]bombesin (1-14)
[83546-42-3]	2876	FEAU
[84225-95-6]	1520	Raclopride
[84226-04-0]	7500	S-(-)-BZM
[84226-06-2]	7510	S-(-)-IBZM
[84377-97-9]	1690	Nitromazenil
[84378-44-9]	1720	Flumazenil acid
[844699-84-9] (free base)	4320	AFM precursor
[845642-52-6]	3355	(+)-Flubatine standard
[845642-53-7]	3351	(-)-Flubatine standard
[845882-24-8]	3110	N,O-Di-Boc-2-TMSn-m-tyrosine ethyl ester
[848820-27-9] (net peptide)	9752	[Nal^{3}]Octreotide acetate
[849469-03-0]	3560	Desmethyl ABP688
[849469-03-0]	3561	Desmethyl ABP688 (GMP)
[851705-46-9]	3591	ISOF
[853759-55-4]	1350	TriBoc-Iodo-L-DOPA
[85416-73-5]	6010	(S)-(+)-Rolipram
[85416-75-7]	6020	(R)-(-)-Rolipram
[854750-33-7] (free base)	3061	FET hydrochloride
[85532-75-8]	1611	(R,S)-PK11195
[857335-91-2] (free base)	1502	(R,S)-O-Desmethylraclopride hydrobromide
[857502-21-7]	1340	TriBoc-L-DOPA methyl ester
[858517-21-2]	1643	(+)-HNO hydrochloride
[858517-21-2]	1647	(+)-HNO hydrochloride (GMP)
[864063-10-5]	3572	FPEB standard
[86487-64-1]	1830	Setoperone

[865474-03-9]	2952	Nitro-Xeloda
[86783-82-6] (cyclic form) [29702-43-0] (aldehyde form)	1100	FDG
[872469-60-8]	7320	BPAMD
[874471-23-5]	3260	Desmethyl-MPT
[87862-25-7]	7001	MIBG Hemisulfate (GMP)
[87862-25-7] [80663-95-2] (free base)	7000	MIBG Hemisulfate
[879368-41-9]	3720	Desmethyl-MK-8278
[88043-21-4]	2300	N-Boc-trans-4-tosyloxy-L-proline methyl ester
[88547-38-0]	2550	(S)-N-Desisopropylpropranolol
[888009-94-7]	6307	Tosyl-propargyl-triethylene glycol
[899808-81-2]	1109	6-FDG precursor
[904892-57-5]	2420	Fluoroethyl-Carfentanil
[905963-70-4]	1646	(+)-F-PHNO
[909024-55-1] (net peptide)	9863	DOTA-cyclo(RGDfK) acetate
[91111-12-5]	6351	(S)-O-Tosyl-1,2-Epoxybutanol
[913820-71-0] (free amino acid)	2321	cis-4-Fluoro-D-proline hydrochloride
[91917-65-6]	1680	Azidomazenil
[92051-23-5]	100	Mannose Triflate, ultra pure
[92051-23-5]	101	Mannose Triflate, ultra pure
[92051-23-5]	102	Mannose Triflate, ultra pure
[92051-23-5]	105	Mannose Triflate PLUS, ultra pure
[92051-23-5]	107	Mannose Triflate PLUS, ultra pure
[922175-70-0] (net peptide)	9790	Galacto-RGD
[924298-51-1]	3570	ABP688
[92817-10-2]	1910	16α-Fluoroestradiol
[93504-92-8]	1280	DEMM
[935886-72-9] (net peptide)	9855	DOTA-NAPamide trifluoroacetate
[93639-12-4]	2750	Cyclopropyl-p-nitrophenyl ketone
[937025-28-0]	4383	FBAM precursor
[937025-29-1]	4384	FBAM standard
[93798-62-0]	7150	BMEDA
[943726-04-3]	6320	3-(4-Azidophenoxy)propyl methansulfonate
[945992-43-8]	3590	ISOM
[94886-04-1]	2110	Acetic acid piperidin-4-yl ester hydrochloride
[949091-68-3]	4173	FE-PE2I
[960403-07-0]	1790	(R)-Fluoroethyl-Etomidate
[97614-41-0]	2870	2-O-(Trifluoromethylsulfonyl)-1,3,5-tri-O-benzoyl-α-D-ribofuranose
[97672-34-9]	2879	αFMAU
[98598-82-4]	2400	Desmethylcarfentanil, sodium salt
[99705-65-4]	1645	(+)-PHNO hydrochloride
[99833-85-9]	1642	(+)-9-MeO-HNO hydrochloride

Tracer Index

List of tracers and ABX products related to.

Tracer	Product related to the tracer	Product number	Product use
(α-Aminoisobutyric acid)	rac [^{11}C]-AIB precursor	2340	Precursor for [^{11}C]-AIB
(α-Aminoisobutyric acid)	S-[^{11}C]-AIB precursor	2342	Precursor for [^{11}C]-AIB
6-FDG	6-Deoxy-6-fluoro-D-glucopyranose	1108	Reference standard for 6-[^{18}F]Fluoro-6-deoxy-D-glucose
ABP688	Desmethyl ABP688	3560	Precursor for [^{11}C/^{3}H]ABP688
ABP688	Desmethyl ABP688 (GMP)	3561	Precursor for [^{11}C/^{3}H]ABP688
ABP688	ABP688	3570	Reference standard for [^{11}C/^{3}H]ABP688
adenosine receptor	CPTPX	3750	Precursor for [^{18}F]CPFPX
adenosine receptor	CPFPX	3751	Reference standard for [^{18}F]CPFPX
AFM	AFM precursor	4320	Precursor for [^{11}C]AFM
AFM	AFM standard	4330	Reference standard for [^{11}C]AFM and [^{18}F]AFM
Alkylbenzenes	Cyclopropyl-p-nitrophenyl ketone	2750	Precursor for [^{18}F]-labelled building block for different alkylbenzenes
Altanserin	Nitro-Altanserin	1800	Precursor for [^{18}F]Fluoro-Altanserin
Altanserin	Altanserin	1810	Reference standard for [^{18}F]Fluoro-Altanserin
Altropane	Altropane acid	4200	Precursor for [^{11}C]Altropane
Altropane	Altropane acid hydrochloride	4201	Precursor for [^{11}C]Altropane
Altropane	Altropane	4210	Reference standard for [^{11}C]Altropane Reference standard for [*I]Altropane
Altropane	Altropane hydrochloride	4211	Reference standard for [^{11}C]Altropane Reference standard for [*I]Altropane
AMBA	AMBA acetate	9714	
AMBA	NODAGA-AMBA trifluoroacetate	9814	
AMBA	NOTA-AMBA trifluoroacetate	9815	
AMP / AChE	Acetic acid piperidin-4-yl ester hydrochloride	2110	Precursor for [^{11}C]AMP
AMP / AChE	Acetic acid 1-methyl-piperidin-4-yl ester hydrochloride	2120	Reference standard for [^{11}C]AMP
Androstanone	TNB-Androstanone	1919	Precursor [^{18}F]17β-Hydroxy-7α-fluoro-5α-androstan-3-one
antibodies	TFP-N-sucDf-Fe	7270	Precursor for mAb-N-sucDf-^{89}Zr
Arylsulfonate	1,2-Bis(nosyloxy)ethane	6179	Precursor for 1-[^{18}F]Fluoro-2-nosyloxy-ethane
ASEM	ASEM precursor	3371	Precursor for [^{18}F]ASEM
Astemizole	Astemizole	5165	Reference standard for [^{11}C]Astemizole
Astemizole	O-Desmethyl Astemizole	5166	Precursor for [^{11}C]Astemizole and [^{18}F]Fluoroethyl-astemizole
ATSM	ATSM	1455	Complexation agent for [*Cu]-Labelling
ATSM	NiATSM	1459	Reference standard for [*Ni]NiATSM
Benzamide	ISOM	3590	Precursor for (N-[4-(6,7-Dimethoxy-3,4-dihydro-1H-isoquinolin-2-yl)-butyl]-2-(2-[^{18}F]fluoro-ethoxy)-5-methyl-benzamide
Benzamide	ISOF	3591	Reference standard for (N-[4-(6,7-Dimethoxy-3,4-dihydro-1H-isoquinolin-2-yl)-butyl]-2-(2-[^{18}F]fluoro-ethoxy)-5-methyl-benzamide
benzodiazepine receptor	(R)-N-Desmethyl PK11195	1600	Precursor for (R)-[N-Methyl-^{11}C-]PK11195
benzodiazepine receptor	(S)-PK 11195	1609	Reference standard for analytical detection of (S)-[N-Methyl-^{11}C]PK11195.
benzodiazepine receptor	(R)-PK11195	1610	Reference standard for (R)-[N-Methyl-^{11}C]PK11195
benzodiazepine receptor	(R,S)-PK11195	1611	Reference standard for (R,S)-[N-Methyl-^{11}C]PK11195
benzodiazepine receptor	(S)-N-Desmethyl PK11195	1620	Precursor for (S)-[N-Methyl-^{11}C-]PK11195
benzodiazepine receptor	(R,S)-N-Desmethyl PK11195	1640	Precursor for (R,S)-[N-Methyl-^{11}C-]PK11195
Benztropine	Norbenztropine	4230	Precursor for [^{11}C]Benztropine
Benztropine	Benztropine Mesylate	4231	Reference standard for [^{11}C]Benztropine
beta-CFT	(-)-2-beta-Carbomethoxy-3-beta-(4-fluorophenyl)tropane	4000	Reference standard for [^{11}C]-beta-CFT
beta-CFT	(-)-2-beta-Carbomethoxy-3-beta-(4-fluorophenyl)nortropane	4020	Precursor for [^{11}C]beta-CFT
beta-CIT	(-)-2-beta-Carbomethoxy-3-beta-(4-iodophenyl)tropane	4030	Reference standard for [^{11}C]beta-CIT
beta-CIT	(-)-2-beta-Carbomethoxy-3-beta-(4-iodophenyl)nortropane	4050	Precursor for [^{11}C]beta-CIT
beta-CIT ester	beta-CIT acid	4140	Precursor for 2-[^{18}F]Fluoroethyl-beta-CIT (ester)
beta-CIT ester	2-FE-beta-CIT	4150	Reference standard for 2-[^{18}F]Fluoroethyl-beta-CIT (ester)

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Tracer	Product related to the tracer	Product number	Product use
beta-CITFE	CITFES	4100	Precursor for [^{11}C]beta-CITFE
beta-CITFE	CITFE	4110	Reference standard for [^{18}F]beta-CITFE Reference standard for [*I]beta-CITFE
beta-CITFP	CITTP Tosylate	4122	Precursor for [^{18}F]beta-CITFP
beta-CITFP	CITFP	4130	Reference standard for [^{18}F]beta-CITFP Reference standard for [*I]beta-CITFP
beta-CITFP	TBSCT-FP	4132	Precursor for [^{123}I]beta-CITFP
beta-CPT	(-)-2-beta-Carbomethoxy-3-beta-(phenyl)tropane	4060	Reference standard for [^{11}C]-beta-CPT
BFE	2-Bromoethyl nosylate	6181	Precursor for [^{18}F]BFE
BFE	2-Bromoethyl triflate	6182	Precursor for [^{18}F]BFE
BFE	2-Bromoethyl tosylate	6183	Precursor for [^{18}F]BFE
BMP / AChE	Butyric acid piperidin-4-yl ester hydrochloride	2150	Precursor for [^{11}C]BMP
BMP / AChE	Butyric acid 1-methyl-piperidin-4-yl ester hydrochloride	2160	Reference standard for [^{11}C]BMP
BPAMD	BPAMD	7320	Precursor for radiolabelled BPAMD
Buprenorphine	3-O-Trityl-6-O-desmethyl-buprenorphine	2055	Precursor for 6-O-[^{11}C]-buprenorphine
Buprenorphine	Buprenorphine hydrochloride	2056	Reference standard for 6-O-[^{11}C]-buprenorphine
Carazolol	(S)-Desisopropylcarazolol	2510	Precursor for (S)-[^{11}C]Carazolol
Carazolol	(R,S)-Desisopropylcarazolol	2511	Precursor for (R,S)-[^{11}C]Carazolol
Carazolol	(S)-Carazolol	2530	Reference standard for (S)-[^{11}C]Carazolol
Carazolol	(R)-Desisopropylcarazolol	2500	Precursor for (R)-[^{11}C]Carazolol
Carazolol	(R)-Carazolol	2520	Reference standard for (R)-[^{11}C]Carazolol
Carazolol	(R,S)-Carazolol	2540	Reference standard for [^{11}C]Carazolol
Carfentanil	Desmethylcarfentanil acid	2390	Precursor for [^{11}C]Carfentanil
Carfentanil	Desmethylcarfentanil, sodium salt	2400	Precursor for [^{11}C]Carfentanil
Carfentanil	Fluoroethyl-Carfentanil	2420	Reference standard for [^{18}F]Fluoroethylcarfentanil
Carfentanil	Fluoroethyl-Carfentanil hydrochloride	2421	Reference standard for [^{18}F]Fluoroethylcarfentanil
CFT	TMS-CT	4040	Precursor for [^{18}F]CFT
CFT	TBS-CT	4041	Precursor for [^{18}F]CFT
CGP 12177	(S)-1-(2-Amino-3-nitrophenoxy)-3-tert-butylamino-propan-2-ol	2590	Precursor for [^{11}C]CGP 12177
Chelator	TACN	7281	Chelator for radiometals
Chelator	PrP9	7284	Bifunctional chelating agent
Chelator	HBED-CC-tris(tBu)ester	7330	Bifunctional chelating agent
Chelator	HBED-CC-di(tBu)ester	7331	Bifunctional chelating agent
Choline	Dimethylaminoethanol	6100	Precursor for [^{11}C]Choline
Choline	Fluoroethylcholine tosylate	6120	Reference standard for [^{18}F]Fluoroethylcholine
Choline	Fluoromethylcholine chloride	6130	Reference standard for [^{18}F]Fluoromethylcholine
Choline	Fluoromethylcholine bromide	6140	Reference standard for [^{18}F]Fluoromethylcholine
Choline	Bromocholine bromide	6141	Reference standard for byproduct of [^{18}F]Fluoromethylcholine synthesis
Choline	Choline chloride	6150	Reference standard for [^{11}C]Choline
Choline	Fluoroethylcholine chloride	6160	Reference standard for [^{18}F]Fluoroethylcholine
Choline	Choline iodide	6170	Reference standard for [^{11}C]Choline
Choline	DMMB	6173	Reference standard for byproduct of [^{18}F]Fluoroethylcholine synthesis
Choline	BHTMEDA	6174	Reference standard for byproduct of [^{18}F]Fluoroethylcholine synthesis
Click-Reaction	DBCO-SCN	6221	Reagent for Copper-free Click Reaction
CNS 1261	CNS 1261	7020	Reference standard for [*I]CNS 1261
CNS 1261	TBS-CNS 1261	7030	Precursor for [*I]CNS 1261
CNS 5161	Desmethyl-CNS 5161	3540	Precursor for [^{11}C]CNS 5161
CNS 5161	CNS 5161	3550	Reference standard for [^{11}C]CNS 5161
CPFPX	CPTPX	3750	Precursor for [^{18}F]CPFPX
CPFPX	CPFPX	3751	Reference standard for [^{18}F]CPFPX
Cryptand	Cryptand 222	800	Aminopolyether used to dissolve K^+ salts in nucleophilic [^{18}F]labelling reactions
CuATSM	CuATSM	1457	Reference standard for [*Cu]CuATSM
Cu-Labelling	ATSM	1455	Complexation agent for [*Cu]-Labelling
Cu-Labelling	PTSM	1456	Complexation agent for [*Cu]-Labelling
Cyclen	Cyclen	7290	
Cyclo-RGDfK	Cyclo-RGDfK	9860	Integrin targeting sequence.

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Tracer	Product related to the tracer	Product number	Product use
Cyclo-RGDfK	Cyclo-RGDfK dimer trifluoroacetate	9861	Integrin targeting sequence.
cysteine-bearing peptides/proteines	6-O-Tosyloxyethyl-CBT	5149	Precursor for [^{18}F]-labeling of N-terminal cysteine-bearing peptides and proteines
D2 receptor	FLB 457	1540	Reference standard for [^{11}C]FLB 457
DAOTA-octreotate	DOTA-TATE acetate (GMP)	9772	Precursor for radiolabelled DOTA-[Tyr^3]octreotate
DASB	MASB	4300	Precursor for [^{11}C]DASB
DASB	MASB (GMP)	4301	Precursor for [^{11}C]DASB
DASB	DASB	4310	Reference standard for [^{11}C]DASB
DASB	DASB (GMP)	4311	Reference standard for [^{11}C]DASB
Dihydrotetrabenazine	(±)-beta-Dihydrotetrabenazine	4731	
Dihydrotetrabenazine	(±)-Tetrabenazine	4732	Reference standard for [^{11}C]Tetrabenazine
Dihydrotetrabenazine	(±)-9-O-Desmethyl-tetrabenazine	4733	Precursor for [^{11}C]Tetrabenazine
Diprenorphine	3-O-Trityl-6-O-desmethyl-diprenorphine	2000	Precursor for [^{11}C]Diprenorphine
Diprenorphine	Diprenorphine hydrochloride	2010	Reference standard for [^{11}C]Diprenorphine
Diprenorphine	Diprenorphine	2020	Reference standard for [^{11}C]Diprenorphine
Diprenorphine	3-O-Trityl-diprenorphine	2030	Reference standard for byproduct of [^{11}C]Diprenorphine synthesis
Diprenorphine	6-O-Fluoroethyl-6-O-desmethyl-3-O-trityl-diprenorphine	2050	Reference standard for byproduct of [^{18}F]Fluoroethyl-diprenorphine synthesis
Diprenorphine	6-O-Fluoroethyl-6-O-desmethyl-diprenorphine	2040	Reference standard for [^{18}F]Fluoroethyl-diprenorphine
DOPA	OMFD precursor ABX004	1363	Precursor for [^{18}F]OMFD
DOPA	OMFD	1369	Reference standard for [^{18}F]OMFD
Dopamine Receptor	S-(-)-BZM	7500	Precursor for S-(-)-[$^{123/125}$I]IBZM
Dopamine Receptor	S-(-)-IBZM	7510	Reference standard for S-(-)-[*I]IBZM
DOTA	DOTA	7300	Cation complexation agent
DOTA	DOTA-Substance P	9960	Precursor for radiometal-labelled neurokinin receptor targeted peptides
DOTA-bombesin	DOTA-[Pro^1,Tyr^4]bombesin (1-14)	9715	Precursor for radiolabelled DOTA-[Pro^1,Tyr^4]bombesin (1-14)
DOTAEt	DOTAEt	7301	Cation complexation agent
DOTA-Lanreotide	DOTA-Lanreotide acetate	9831	Precursor for radiolabelled DOTA-Lanreotide
DOTA-NAPamide	DOTA-NAPamide trifluoroacetate	9855	Precursor for radiolabelled DOTA-NAPamide
DOTA-NOC	DOTA-NOC acetate	9712	Precursor for radiolabelled DOTA-NOC
DOTA-NOC	DOTA-NOC acetate (GMP)	9716	Precursor for radiolabelled DOTA-NOC
DOTA-NOC	Ga-DOTA-NOC	9717	Reference standard for [^{68}Ga]DOTA-NOC
DOTA-RGD	DOTA-cyclo(RGDfK) acetate	9863	Precursor for radiometal-labelled DOTA-RGD.
DOTA-Sargastrin	DOTA-Sargastrin	9857	Precursor for radiometal-labelled DOTA-Sargastrin
DOTA-TATE	Ga-DOTA-TATE	9773	Reference standard for [^{68}Ga]DOTA-TATE
DOTA-TOC	DOTATOC (GMP)	9702	Precursor for radiolabelled DOTA-TOC
DOTA-TOC	Ga-DOTA-TOC acetate	9703	
DOTA-TOC	Y-DOTA-TOC	9704	Reference Standard for 90Y-DOTA-TOC
DOTA-TOC	Lu-DOTA-TOC	9705	Reference standard for ^{177}Lu-DOTA-TOC
DTBZ	(±)-9-O-Desmethyl-α-dihydrotetrabenazine	4700	Precursor for [^{11}C]DTBZ
DTBZ	(+)-9-O-Desmethyl-α-dihydrotetrabenazine	4710	Precursor for (+)-[^{11}C]DTBZ
DTBZ	(-)-9-O-Desmethyl-α-dihydrotetrabenazine	4720	Precursor for (-)-[^{11}C]DTBZ
DTBZ	(±)-α-Dihydrotetrabenazine	4730	Reference standard for [^{11}C]Dihydrotetrabenazine
DTPA-TOC	DTPA-TOC trifluoroacetate	9744	Precursor for radiolabelled DTPA-TOC
EDTMP	EDTMP	7165	Ligand for radiolabelling
EFG receptor	Desmethyl-PD 153035	5200	Precursor for [Methoxy-^{11}C]PD 153035
EFG receptor	PD 153035	5210	Reference standard for [Methoxy-^{11}C]PD 153035
Epidepride	Tin-epidepride precursor	1521	Precursor for [^{123}I]Epidepride and [^{125}I]Epidepride
Epidepride	Epidepride	1522	Reference standard for [^{123}I]Epidepride and [^{125}I]Epidepride
Estradiol	MMSE	1900	Precursor for 16α-[^{18}F]Fluoroestradiol
Estradiol	16α-Fluoroestradiol	1910	Reference standard for 16α-[^{18}F]Fluoroestradiol
Ethionine	L-Homocysteine thiolactone hydrochloride	2210	Precursor for L-[^{11}C]Methyl-methionine, - ethionine, and -propionine
Ethylcholine	Fluoroethylcholine tosylate	6120	Reference standard for [^{18}F]Fluoroethylcholine
Ethylcholine	Fluoroethylcholine chloride	6160	Reference standard for [^{18}F]Fluoroethylcholine
Ethylcholine	1,2-Bis(tosyloxy)ethane	6180	Precursor for [^{18}F]Fluoroethylcholine
Etomidate	(R)-Etomidate	1770	Reference standard for [^{11}C]Etomidate
FAAU	FTAU	2890	Precursor for 5-[^{131}I]FIAU and 5-[^{211}At]FAAU

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Tracer	Product related to the tracer	Product number	Product use
FAC	Bis(trimethylsilyl)cytosine	2873	Precursor 2 for [^{18}F]FAC
FAC	FAC	2930	Reference standard for [^{18}F]FAC
FAC	αFAC	2931	Analytical standard for validation of [^{18}F]FAC
Fallypride	Tosyl-Fallypride	1550	Precursor for [^{18}F]Fallypride
Fallypride	Fallypride	1560	Reference standard for [^{18}F]Fallypride
Fallypride	Tosyl-Desmethoxyfallypride	1570	Precursor for [^{18}F]Desmethoxyfallypride
Fallypride	Desmethoxyfallypride	1580	Reference standard for [^{18}F]Desmethoxyfallypride
FAP	Nitro-AP	3320	Precursor for [^{18}F]FAP
FAP	TMA-AP	3350	Precursor for [^{18}F]FAP
FAP	FAP tartrate	3340	Reference standard for [^{18}F]FAP
FAU	FAU	2900	Reference standard for 2´-[^{18}F]FAU
FAZA	1-(2,3-Diacetyl-5-tosyl-(α-D-arabinofuranosyl)-2-nitroimidazole	1450	Precursor for [^{18}F]FAZA
FAZA	1-(5-Deoxy-5-fluoro-α-D-arabinofuranosyl)-2-nitroimidazole	1451	Reference standard for [^{18}F]FAZA
FB	TBAB	4389	Precursor for [^{18}F]FB
FB	PMBAB	4390	Precursor for [^{18}F]FB
FB	FB precursor	4391	Precursor for [^{18}F]FB
FB	4-Formyl-N,N,N-Trimethylanilinium triflate	9850	Precursor for 4-[^{18}F]Fluorobenzaldehyde
FBA	CPTMA	4385	Precursor for [^{18}F]FBA, [^{18}F]FBBA and [^{18}F]FBAPM
FBAM	FBAM precursor	4383	Precursor for [^{18}F]FBAM
FBAM	FBAM standard	4384	Reference standard for [^{18}F]FBAM
FBAPM	CPTMA	4385	Precursor for [^{18}F]FBA, [^{18}F]FBBA and [^{18}F]FBAPM
FBBA	CPTMA	4385	Precursor for [^{18}F]FBA, [^{18}F]FBBA and [^{18}F]FBAPM
FBEM	FBEM precursor	4398	Precursor for [^{18}F]FBEM
FBEM	FBEM standard	4399	Reference standard for [^{18}F]FBEM
F-Choline	Dimethylaminoethanol	6100	Precursor for [^{11}C]Choline
F-Choline	Fluoromethylcholine chloride	6130	Reference standard for [^{18}F]Fluoromethylcholine
F-Choline	Fluoromethylcholine bromide	6140	Reference standard for [^{18}F]Fluoromethylcholine
F-Choline	Bromocholine bromide	6141	Reference standard for byproduct of [^{18}F]Fluoromethylcholine synthesis
F-Choline	Choline chloride	6150	Reference standard for [^{11}C]Choline
F-Choline	Choline iodide	6170	Reference standard for [^{11}C]Choline
F-Choline	DMMB	6173	Reference standard for byproduct of [^{18}F]Fluoroethylcholine synthesis
F-Choline	BHTMEDA	6174	Reference standard for byproduct of [^{18}F]Fluoroethylcholine synthesis
F-Choline	Dibromoethane	6175	
F-Choline	Dibromomethane	6176	
FDDNP	DMTEAN	5000	Precursor for [^{18}F]FDDNP
FDDNP	DFEAN	5010	Precursor for [^{11}C]FDDNP
FDDNP	DMEAN	5020	Precursor for [^{18}F]FDDNP
FDDNP	DMFEAN	5030	Reference standard for [^{18}F]FDDNP
FDG	Mannose Triflate, ultra pure	100	Precursor for [^{18}F]FDG
FDG	Mannose Triflate, ultra pure	101	Precursor for [^{18}F]FDG
FDG	Mannose Triflate, ultra pure	102	Precursor for [^{18}F]FDG
FDG	Mannose Triflate PLUS, ultra pure	105	Precursor for [^{18}F]FDG
FDG	Mannose Triflate PLUS, ultra pure	107	Precursor for [^{18}F]FDG
FDG	FDG	1100	Reference standard for [^{18}F]FDG
FDG	6-FDG precursor	1109	Precursor for 6-[^{18}F]FDG
FDG	ClDG	1110	Reference standard for byproduct of [^{18}F]FDG synthesis
FDG	1,2,3,4-Tetra-O-acetyl-beta-D-glucopyranose	1131	TLC Standard for Testing of Radiochemical Purity of [^{18}F]FDG according to Ph. Eur. 6.2, 1325
FDG byproduct	FDM	1120	Reference standard for byproduct of [^{18}F]FDG synthesis
FDG byproduct	ACY-FDG	1130	Reference standard for byproduct of [^{18}F]FDG synthesis

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Tracer	Product related to the tracer	Product number	Product use
FDGal	Talose Triflate	1140	Precursor for [^{18}F]FDGal
FDGal	FDGal	1150	Reference standard for [^{18}F]FDGal
FDHT	FDHT precursor	1916	Precursor for [^{18}F]FDHT
FDHT	FDHT standard	1918	Reference standard for [^{18}F]FDHT
FDM	Glucose Triflate	1117	Precursor for [^{18}F]FDM
FDM	MBETG	1118	Precursor for [^{18}F]FDM
FDM	MBBTG	1119	Precursor for [^{18}F]FDM
FDOPA	6-Trimethylstannyl-L-DOPA	1300	Stannylated precursor for 6-[^{18}F]Fluoro-L-DOPA
FDOPA	6-Trimethylstannyl-D,L-DOPA	1302	Precursor for 6-[^{18}F]Fluoro-D,L-DOPA
FDOPA	6-Trimethylstannyl-D-DOPA	1303	Precursor for 6-[^{18}F]Fluoro-D-DOPA
FDOPA	6-Fluoro-L-DOPA hydrochloride	1310	Reference standard for 6-[^{18}F]Fluoro-L-DOPA
FDOPA	6-Fluoro-D,L-DOPA hydrochloride	1311	Reference standard for 6-[^{18}F]Fluoro-D,L-DOPA
FDOPA	F-L-DOPA pinacol boronate precursor	1312	Nucleophilic Precursor for 6-[^{18}F]Fluoro-L-DOPA
FDOPA	DiBoc-Iodo-L-DOPA	1320	Precursor for 6-[^{123}I]Iodo-L-DOPA
FDOPA	3,4-Di-O-Pivaloyl-L-DOPA	1328	Precursor for 6-[^{18}F]Fluoro-L-DOPA
FDOPA	4-O-Pivaloyl-L-DOPA Hydrochloride	1329	Precursor for 6-[^{18}F]Fluoro-L-DOPA
FDOPA	4-O-Pivaloyl-L-DOPA	1330	Precursor for 6-[^{18}F]Fluoro-L-DOPA
FDOPA	6-Hydroxy-D,L-DOPA	1332	Reference standard for byproduct of 6-[^{18}F]Fluoro-L-DOPA synthesis
FDOPA	Nucleophilic F-L-DOPA precursor	1335	Nucleophilic precursor for 6-[^{18}F]Fluoro-L-DOPA
FDOPA	n.c.a. Nucleophilic F-L-DOPA precursor	1336	n.c.a. Nucleophilic Precursor for 6-[^{18}F]Fluoro-L-DOPA
FDOPA	6-Nitro-L-DOPA hydrogensulfate	1337	Reference standard for byproduct of nucleophilic 6-[^{18}F]fluoro-L-DOPA synthesis
FDOPA	6-Nitro-Formyl-DOPA HCl	1338	Reference standard for byproduct of nucleophilic 6-[^{18}F]fluoro-L-DOPA synthesis
FDOPA	6-Fluoro-Formyl-DOPA HCl	1339	Reference standard for byproduct of nucleophilic 6-[^{18}F]fluoro-L-DOPA synthesis
FDOPA	TriBoc-L-DOPA methyl ester	1340	Stannylated precursor for 6-[^{18}F]Fluoro-L-DOPA
FDOPA	TriBoc-D,L-DOPA ethyl ester	1341	Analytical standard for validation of 6-[^{18}F]Fluoro-L-DOPA synthesis
FDOPA	TriBoc-L-DOPA ethyl ester	1342	[^{18}F]Fluoro-L-DOPA synthesis
FDOPA	TriBoc-Iodo-L-DOPA	1350	Precursor for 6-[$^{123/125}$I]Iodo-DOPA
FEAU	2-O-(Trifluoromethylsulfonyl)-1,3,5-tri-O-benzoyl-α-L-ribofuranose	2869	Precursor 1 for [^{18}F]L-FEAU and [^{18}F]L-FMAU
FEAU	2-O-(Trifluoromethylsulfonyl)-1,3,5-tri-O-benzoyl-α-D-ribofuranose	2870	Precursor 1 for [^{18}F]FEAU and [^{18}F]FMAU
FEAU	5-Ethyl-2,4-bis[(trimethylsilyl)oxy]pyrimidine	2871	Precursor 2 for [^{18}F]FEAU
FEAU	L-FEAU	2874	Reference standard for [^{11}C]L-FEAU and [^{18}F]L-FEAU
FEAU	α-L-FEAU	2875	Analytical standard for validation of [^{11}C]L-FEAU and [^{18}F]L-FEAU synthesis
FEAU	FEAU	2876	Reference standard for [^{11}C]FEAU and [^{18}F]FEAU
FEAU byproduct	αFEAU	2877	Reference standard for byproduct of [^{11}C]FEAU and [^{18}F]FEAU synthesis
FEBV	(-)-TEBV	4600	Precursor for [^{18}F]FEBV
FEBV	(-)-FEBV	4610	Reference standard for [^{18}F]FEBV
FECNT	Nor-beta-CCIT	4180	Precursor for [^{18}F]FECNT
FECNT	FECNT	4190	Reference standard for [^{18}F]FECNT
FEHTP Standard	5-FEHTP hydrochloride	6532	Reference standard for 5-[^{18}F]FEHTP
FE-PE2I	TEO-PE2I	4172	Precursor for [^{18}F]FE-PE2I
FE-PE2I	FE-PE2I	4173	Referece standard for [^{18}F]FE-PE2I
FEPPA	FEPPA precursor	1654	Precursor for [^{18}F]-FEPPA
FEPPA	FEPPA standard	1655	Reference standard for [^{18}F]-FEPPA
FET	TET	3050	Precursor for [^{18}F]FET
FET	TET (GMP)	3051	Precursor for [^{18}F]FET
FET	TET (GMP)	3052	Precursor for [^{18}F]FET
FET	FET hydrochloride	3061	Reference standard for [^{18}F]FET
FET	D-FET hydrochloride	3071	Reference standard for D-[^{18}F]FET
FETA	N-(2-Tosyloxyethyl)phthalimide	1452	Tosyl Precursor for [^{18}F]FETA (FETA-Precursor I)

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Tracer	Product related to the tracer	Product number	Product use
FETA	2,3,5,6-Tetrafluorophenyl-2-(2-nitroimidazol-1-yl)acetate	1453	Tetrafluorphenyl-Precursor for [^{18}F]FETA (FETA-Precursor II)
FETA	N-(2-Fluoroethyl)-2-(2-nitroimidazol-1-yl)acetamide	1454	Reference standard for [^{18}F]FETA
FETNIM	FETNIM precursor	1430	Precursor for [^{18}F]FETNIM
FETNIM	FETNIM	1440	Reference standard for [^{18}F]FETNIM
FETO	(R)-Desethyl-Etomidate	1780	Precursor for [^{11}C]Metomidate, [^{11}C]Etomidate, and (R)-[^{18}F]FETO
FETO	(S)-Desethyl-Etomidate	1782	Precursor for [^{11}C]Metomidate and [^{11}C]Etomidate and (S)-[^{18}F]FETO
FETO	(R)-Fluoroethyl-Etomidate	1790	Reference standard for (R)-[^{18}F]FETO
FFMZ	Tosyloxyethylflumazenil	1721	Precursor for [^{18}F]FFMZ
FFMZ	Flumazenil acid	1720	Precursor for [^{18}F]FFMZ
FFMZ	Fluoroethylflumazenil	1730	Reference standard for [^{18}F]FFMZ
FFNP	FFNP precursor	1926	Precursor for [^{18}F]FFNP
FFNP	FFNP standard	1928	Reference standard for [^{18}F]FFNP
FHBG	Tosyl-FHBG	2960	Precursor for [^{18}F]FHBG
FHBG	FHBG	2970	Reference standard for [^{18}F]FHBG
FIAU	FIAU	2910	Reference standard for [$^{124/125/131}$I]FIAU
FIRU	FIRU	2922	Reference standard for 5-[$^{123/125}$I]FIRU
FLB 457	FLB 604	1530	Precursor for [^{11}C]FLB 457
FLB 457	FLB 457	1540	Reference standard for [^{11}C]FLB 457
FLIU	3´-Fluoro-2´,3´-dideoxyuridine	2940	Precursor for 5-[*I]FLIU
FLT	DMTr-lyxothymidine	1180	Precursor for [^{18}F]FLT
FLT	DMTr-Nosyl-lyxothymidine	1190	Precursor for [^{18}F]FLT
FLT	Dimethoxybenzyl-FLT precursor	1200	Precursor for [^{18}F]FLT
FLT	Anhydrothymidine-FLT precursor	1210	Precursor for [^{18}F]FLT
FLT	FLT Ultra Pure	1219	Reference standard for [^{18}F]FLT
FLT	3´-Fluoro-thymidine (FLT)	1220	Reference standard for [^{18}F]FLT
FLT	3´-Iodo-thymidine	1222	
FLT	5´-O-Benzoyl-2,3´-anhydrothymidine	1230	Precursor for [^{18}F]FLT
FLT	5´-O-Benzoyl-2,3´-anhydrothymidine (GMP)	1231	Precursor for [^{18}F]FLT
FLT	3-N-Boc-5´-O-dimethoxytrityl-3´-O-nosyl-thymidine	1240	Precursor for [^{18}F]FLT
FLT	3-N-Boc-5´-O-dimethoxytrityl-3´-O-nosyl-thymidine (GMP)	1241	Precursor for [^{18}F]FLT
FLT	2,2´-Anhydrothymidine	1250	Precursor for 2´-[^{18}F]Fluoro-thymidine
FLT	2´-Fluoro-thymidine	1260	Reference standard for 2´-[^{18}F]Fluoro-thymidine
FLT	3-N-Boc-5´-O-dimethoxytrityl-3´-fluorothymidine	1261	Reference standard for byproduct of [^{18}F]FLT synthesis
FLT byproduct	2´,3´-Didehydro-3´-deoxythymidine	2954	Reference standard for byproduct of [^{18}F]FLT synthesis
Flubatine	(-)-Flubatine standard	3351	Reference standard for (-)-[^{18}F]Flubatine
Flubatine	(-)-Flubatine precursor	3353	Precursor for (-)-[^{18}F]Flubatine
Flubatine	(-)-Flubatine precursor (GMP)	3354	Precursor for (-)-[^{18}F]Flubatine
Flubatine	(+)-Flubatine standard	3355	Reference standard for (+)-[^{18}F]Flubatine
Flubatine	(+)-Flubatine precursor	3357	Precursor for (+)-[^{18}F]Flubatine
Flubatine	(+)-Flubatine precursor (GMP)	3358	Precursor for (+)-[^{18}F]Flubatine
Flumazenil	Nitromazenil	1690	Precursor for [^{18}F]Flumazenil
Flumazenil	Mazenil pinacol boronate	1691	Precursor for [^{18}F]Flumazenil
Flumazenil	Desmethylflumazenil	1700	Precursor for [^{11}C]Flumazenil
Flumazenil	Flumazenil	1710	Reference standard for [^{11}C]Flumazenil
Fluoroacetate	Ethyl (p-tosyloxy)acetate	6200	Precursor for [^{18}F]Fluoroacetate
Fluoroacetate	Potassium fluoroacetate	6210	Reference standard for [^{18}F]Fluoroacetate
Fluoroacetate	Sodium fluoroacetate	6211	Reference standard for [^{18}F]Fluoroacetate
Fluorobenzaldehyde	TBAB	4389	Precursor for [^{18}F]FB
Fluorobenzaldehyde	PMBAB	4390	Precursor for [^{18}F]FB
Fluorobenzaldehyde	FB precursor	4391	Precursor for [^{18}F]FB
Fluorobenzaldehyde	4-Formyl-N,N,N-Trimethylanilinium triflate	9850	Precursor for 4-[^{18}F]Fluorobenzaldehyde

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Tracer	Product related to the tracer	Product number	Product use
Fluorobenzylguanidine	CMTMA	4386	Precursor for meta-[^{18}F]Fluorobenzylguanidine
Fluorobutyne	1-Tosyloxy-3-butyne	6301	Precursor for 1-[^{18}F]Fluoro-3-butyne
Fluorodopamine	N-Trifluoroacetyl-3,4-dimethoxy-6-trimethylstannyl-phenethylamine	1370	Precursor for 6-[^{18}F]Fluorodopamine
Fluorodopamine	N-Trifluoroacetyl-3,4-di-tert-butoxycarbonyloxy-6-trimethylstannyl-phenethylamine	1371	Precursor for 6-[^{18}F]Fluorodopamine
Fluorodopamine	6-Fluorodopamine	1380	Reference standard for 6-[^{18}F]Fluorodopamine
Fluoroethyl arylsulfonates	2-Fluoroethyl tosylate	6184	Reference standard for 2-[^{18}F]Fluoroethyl tosylate
Fluoroethylcholine	DMMB	6173	Reference standard for byproduct of [^{18}F]Fluoroethylcholine synthesis
Fluoroethylcholine	BHTMEDA	6174	Reference standard for byproduct of [^{18}F]Fluoroethylcholine synthesis
Fluorohexyne	1-Tosyloxy-5-hexyne	6303	Precursor for 1-[^{18}F]Fluoro-5-hexyne
Fluoromethyl tosylate	Fluoromethyl tosylate	6194	Reference standard for 1-[^{18}F]Fluoromethyl tosylate
Fluoromethyl tosylate	Bis(tosyloxy)methane	6177	Precursor for 1-[^{18}F]Fluoromethyl tosylate
Fluoropentyne	1-Tosyloxy-4-pentyne	6302	Precursor for 1-[^{18}F]Fluoro-4-pentyne
Fluoropropyltosylate	3-Fluoropropyltosylate	6190	Reference standard for 3-[^{18}F]Fluoropropyltosylate
Fluorothymidine	DMTr-lyxothymidine	1180	Precursor for [^{18}F]FLT
Fluorothymidine	DMTr-Nosyl-lyxothymidine	1190	Precursor for [^{18}F]FLT
Fluorothymidine	Dimethoxybenzyl-FLT precursor	1200	Precursor for [^{18}F]FLT
Fluorothymidine	Anhydrothymidine-FLT precursor	1210	Precursor for [^{18}F]FLT
Fluorothymidine	FLT Ultra Pure	1219	Reference standard for [^{18}F]FLT
Fluorothymidine	3´-Fluoro-thymidine (FLT)	1220	Reference standard for [^{18}F]FLT
Fluorothymidine	3´-Iodo-thymidine	1222	
Fluorothymidine	5´-O-Benzoyl-2,3´-anhydrothymidine	1230	Precursor for [^{18}F]FLT
Fluorothymidine	5´-O-Benzoyl-2,3´-anhydrothymidine (GMP)	1231	Precursor for [^{18}F]FLT
Fluorothymidine	3-N-Boc-5´-O-dimethoxytrityl-3´-O-nosyl-thymidine	1240	Precursor for [^{18}F]FLT
Fluorothymidine	3-N-Boc-5´-O-dimethoxytrityl-3´-O-nosyl-thymidine (GMP)	1241	Precursor for [^{18}F]FLT
Fluorothymidine	2,2´-Anhydrothymidine	1250	Precursor for 2´-[^{18}F]Fluoro-thymidine
Fluorothymidine	2´-Fluoro-thymidine	1260	Reference standard for 2´-[^{18}F]Fluoro-thymidine
Fluorothymidine	3-N-Boc-5´-O-dimethoxytrityl-3´-fluorothymidine	1261	Reference standard for byproduct of [^{18}F]FLT synthesis
Fluorouracil	5-Fluorouracil precursor	2958	Precursor for [^{18}F]-5-FU
Fluorouridine	Di-THP-nosyl-AUR	2921	Precursor for 2´-Deoxy-2´-[^{18}F]Fluorouridine
FMAU	2-O-(Trifluoromethylsulfonyl)-1,3,5-tri-O-benzoyl-α-L-ribofuranose	2869	Precursor 1 for [^{18}F]L-FEAU and [^{18}F]L-FMAU
FMAU	2-O-(Trifluoromethylsulfonyl)-1,3,5-tri-O-benzoyl-α-D-ribofuranose	2870	Precursor 1 for [^{18}F]FEAU and [^{18}F]FMAU
FMAU	5-Methyl-2,4-bis[(trimethylsilyl)oxy]pyrimidine	2872	Precursor 2 for [^{18}F]FMAU
FMAU	FMAU	2878	Reference standard for [^{18}F]FMAU and [^{11}C]FMAU
FMAU	αFMAU	2879	Reference standard for byproduct of [^{18}F]FMAU and [^{11}C]FMAU synthesis
FMISO	NITTP	1400	Precursor for [^{18}F]FMISO
FMISO	NITTP (GMP)	1401	Precursor for [^{18}F]FMISO
FMISO	NITTP (GMP)	1402	Precursor for [^{18}F]FMISO
FMISO	Fluoromisonidazole	1410	Reference standard for [^{18}F]FMISO
FMISO	Desmethylmisonidazole	1420	Reference standard for byproduct of [^{18}F]FMISO synthesis
FMT	N-Trifluoroacetyl-5-acetoxy-2-trimethylstannyl-phenylalanine ethyl ester	3100	Precursor for [^{18}F]FMT
FMT	N,O-Di-Boc-2-TMSn-m-tyrosine ethyl ester	3110	Precursor for [^{18}F]FMT

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Tracer	Product related to the tracer	Product number	Product use
FMT	2-Fluoro-m-Tyrosine	3130	Reference standard for [^{18}F]FMT
FPEB	FPEB precursor	3571	Precursor for [^{18}F]FPEB
FPEB	FPEB standard	3572	Reference standard for [^{18}F]FPEB
FPSPPA	(S)-FPSPPA	2450	Precursor for (S)-[^{11}C]-Methyl-FPSPPA
FPSPPA	(R)-FPSPPA	2460	Precursor for (R)-[^{11}C]-Methyl-FPSPPA
FPSPPA	(S)-Methyl-FPSPPA	2470	Reference standard for (S)-[^{11}C]-Methyl-FPSPPA
FPSPPA	(R)-Methyl-FPSPPA	2480	Reference standard for (R)-[^{11}C]-Methyl-FPSPPA
FPyBrA	[^{18}F]FPyBrA/[^{18}F]FPyME precursor	4393	(2-Bromo-N-[3-(2-[^{18}F]fluoropyridin-3-yloxy)propylacetamide)
FPyKYNE	FPyKYNE	4397	Reference standard for [^{18}F]FPyKYNE
FPyKYNE	[^{18}F]FPyKYNE precursor	4396	
FPyME	[^{18}F]FPyBrA/[^{18}F]FPyME precursor	4393	(2-Bromo-N-[3-(2-[^{18}F]fluoropyridin-3-yloxy)propylacetamide)
FPyME	FPyME standard	4394	Reference standard for [^{18}F]FPyME
FTHA	Benzyl-14-(R,S)-tosyloxy-6-thiaheptadecanoate	2850	Precursor for [^{18}F]FTHA
FTHA	14-(R,S)-Fluoro-6-thiaheptadecanoic acid	2860	Reference standard for [^{18}F]FTHA
F-Tyrosine	N,O-Di-Boc-2-TMSn-L-tyrosine ethyl ester	3000	Precursor for 2-[^{18}F]Fluoro-L-tyrosine
F-Tyrosine	2-Fluoro-tyrosine	3010	Reference standard for 2-[^{18}F]Fluoro-L-tyrosine
FU	5-Fluorouracil precursor	2958	Precursor for [^{18}F]-5-FU
FUdR	FUdR	2920	Reference standard for 2´-[^{18}F]FUdR
Galactopyranoside	Me-4-FDG precursor	1138	Precursor for Me-4-[^{18}F]FDG
Galacto-RGD	Galacto-RGD	9790	Precursor for [^{18}F]Galacto-RGD
Galacto-RGD	Fluoropropionyl-Galacto-RGD	9800	Reference standard for [^{18}F]Galacto-RGD
Galactose	Talose Triflate	1140	Precursor for [^{18}F]FDGal
Galactose	FDGal	1150	Reference standard for [^{18}F]FDGal
Gallium citrate	Gallium Citrate (complex)	7520	Reference standard for [^{67}Ga]Gallium citrate
GB 67	GB 99	2570	Precursor for [^{11}C]GB 67
GB 67	GB 67	2580	Reference standard for [^{11}C]GB 67
Glucopyranoside	Me-4-FDG precursor	1138	Precursor for Me-4-[^{18}F]FDG
glutamate carboxypeptidase	PMPA	9510	Inhibitor of glutamate carboxypeptidase 2 (GCP II/N-acetylated α-linked dipeptidase/NAALADase)
Glutamine / 11C-Glutamine	(S)-tert-Butyl 2-((tert-butoxycarbonyl) amino)-4-Iodobutanoat	3191	Precursor for [5-^{11}C]-Glutamine
GR 103545	(S)-(-)-Normethylcarbamoyl-GR 103545	2060	Precursor for (R)-(-)-[^{11}C]-GR 103545
GR 103545	(R)-(+)-Normethylcarbamoyl-GR 103545	2061	Precursor for (S)-(+)-[^{11}C]-GR 103545
GR 205171	Desmethyl-GR 205171	3500	Precursor for [^{11}C]GR 205171
GR 205171	GR 205171	3510	Reference standard for [^{11}C]GR 205171
GR 205171	Desmethyl-GR 205171 Dihydrochloride	3520	Precursor for [^{11}C]GR 205171
GR 205171	GR 205171 Dihydrochloride	3530	Reference standard for [^{11}C]GR 205171
GR 89696	Normethylcarbamoyl-GR 89696	2062	Precursor for [^{11}C]-GR 89696
GR 89696	GR 89696 fumarate	2070	Reference standard for (R)-(-)-[^{11}C]GR 103545 and (S)-(+)-[^{11}C]GR 103545
GR 89696	(R)-(-)-GR103545 fumarate	2071	Reference standard for (R)-(-)-[^{11}C]GR103545
GR 89696	(S)-(+)-GR89696 fumarate	2072	Reference standard for (S)-(+)-[^{11}C]GR89696
GRP receptor	[Pro^{1},Tyr^{4}]bombesin (1-14)	9816	Synthetic GRP receptor ligand.
Guanidine	TMSnBG	7012	Precursor for n.c.a. [*I]Metaiodobenzylguanidine
H3 receptor	Desmethyl-MK-8278	3720	Precursor for [^{11}C]MK-8278
Harmine	Harmol	1753	Precursor for [^{11}C]-Harmine
Harmine	Harmine	1755	Reference standard for [^{11}C]-Harmine
HET	(L)-HET hydrochloride	3081	
HYNIC-Lanreotide	HYNIC-Lanreotide trifluoroacetate	9836	Precursor for radiolabelled HYNIC-Lanreotide
HYNIC-NOC	HYNIC-NOC trifluoroacetate	9730	Precursor for [^{99m}Tc]HYNIC-NOC
HYNIC-RGD	HYNIC-cyclo(RGDfK) trifluoroacetate	9864	Precursor for radiolabelled HYNIC-RGD.
HYNIC-TOC	HYNIC-TOC trifluoroacetate	9721	Precursor for [^{99m}Tc]HYNIC-TOC
Hypoxia	FETNIM precursor	1430	Precursor for [^{18}F]FETNIM
Hypoxia	FETNIM	1440	Reference standard for [^{18}F]FETNIM

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Tracer	Product related to the tracer	Product number	Product use
IAP	TAP	3300	Precursor for [^{123}I]IAP
IAP	IAP	3310	Reference standard for [^{123}I]IAP
IBZM	S-(-)-BZM	7500	Precursor for S-(-)-[$^{123/125}$I]IBZM
IBZM	S-(-)-IBZM	7510	Reference standard for S-(-)-[*I]IBZM
IHDA	16-Iodohexadecanoic acid	7600	Reference standard for 16-[*I]Iodohexadecanoic acid
Iodohexadecanoic acid	16-Iodohexadecanoic acid	7600	Reference standard for 16-[*I]Iodohexadecanoic acid
Iodo-Tyrosine	2-Iodo-tyrosine	3020	Precursor for 2-[^{123}I]Iodo-L-tyrosine
Iodo-Tyrosine	2-Iodo-α-methyl-p-tyrosine	3180	Reference standard for 2-[^{123}I]Iodo-α-methyl-p-L-tyrosine
Iodo-Tyrosine	3-Iodo-α-methyl-p-tyrosine	3190	Reference standard for 3-[^{123}I]Iodo-α-methyl-L-tyrosine
ISOF	ISOM	3590	Precursor for (N-[4-(6,7-Dimethoxy-3,4-dihydro-1H-isoquinolin-2-yl)-butyl]-2-(2-[^{18}F]fluoro-ethoxy)-5-methyl-benzamide
ISOF	ISOF	3591	Reference standard for (N-[4-(6,7-Dimethoxy-3,4-dihydro-1H-isoquinolin-2-yl)-butyl]-2-(2-[^{18}F]fluoro-ethoxy)-5-methyl-benzamide
IUdR	IUdR	2949	Reference standard for [^{123}I]IUdR and [^{125}I]IUdR
IUdR	5-Trimethylstannyl-2´-deoxyuridine	2948	Precursor for [^{123}I]IUdR
Lanreotide	Lanreotide trifluoroacetate	9820	Potent somatostatin agonist, selective for somatostatin receptor subtype 2
Lanreotide	DOTA-Lanreotide acetate	9831	Precursor for radiolabelled DOTA-Lanreotide
Lanreotide	HYNIC-Lanreotide trifluoroacetate	9836	Precursor for radiolabelled HYNIC-Lanreotide
Lansoprazole	[^{18}F]Lansoprazole Precursor	5150	Precursor for [^{18}F]Lansoprazole
Mannose	Glucose Triflate	1117	Precursor for [^{18}F]FDM
Mannose	MBETG	1118	Precursor for [^{18}F]FDM
McN 5652	(+)-McN 5652 Thiobutyrate	4360	Precursor for (+)-[^{11}C]McN 5652
McN 5652	(+)-McN 5652	4370	Reference standard for (+)-[^{11}C]McN 5652
McN 5652	(-)-McN 5652	4380	Reference standard for (-)-[^{11}C]McN 5652
McN5652	(+)-Fluoromethyl-McN 5652	4381	Reference standard for S-([^{18}F]Fluoromethyl)-(+)-McN5652
MDL100907	MDL105725	1840	Precursor for [^{11}C]MDL100907
MDL100907	MDL100907	1850	Reference standard for [^{11}C]MDL100907
MDL100907	MDL100151	1860	Reference standard for rac-[^{11}C]MDL100907
MDL100907	MDL100907 tartrate salt	1870	Reference standard for [^{11}C]MDL100907
Me-4-FDG	Me-4-FDG precursor	1138	Precursor for Me-4-[^{18}F]FDG
MeNER	(2S,3S)-N-Boc-norethylreboxetine	4400	Precursor for [^{11}C]MeNER
MeNER	(2S,3S)-Methylreboxetine	4406	Reference standard for [^{11}C]MeNER
MeNER	(2S,3S)-Desethylreboxetine	4407	Precursor for [^{11}C]MeNER
Me-QNB	QNB	2830	Precursor for [^{11}C]Me-QNB
Me-QNB	Me-QNB	2840	Reference standard for [^{11}C]Me-QNB
Metahydroxyephedrine	Metaraminol (free base)	3380	Precursor for [^{11}C]Metahydroxyephedrine
Metahydroxyephedrine	Metaraminol bitartrate	3390	Precursor for [^{11}C]Metahydroxyephedrine
Metahydroxyephedrine	MHED hydrochloride	3400	Reference standard for [^{11}C]Metahydroxyephedrine
Metaiodobenzylguanidine	MIBG Hemisulfate	7000	Precursor for [*I]Metaiodobenzylguanidine
Metaiodobenzylguanidine	MIBG Hemisulfate (GMP)	7001	Precursor for [*I]Metaiodobenzylguanidine
Metaiodobenzylguanidine	MTMSBG	7010	Precursor for n.c.a. [*I]Metaiodobenzylguanidine
Metaiodobenzylguanidine	TMSnBG	7012	Precursor for n.c.a. [*I]Metaiodobenzylguanidine
Methionine	L-Homocysteine	2200	Precursor for L-[^{11}C]Methyl-methionine
Methionine	D,L-Homocysteine	2205	Precursor for D,L-[^{11}C]methyl-methionine (Analytical standard for validation of L-[^{11}C]methyl-methionine synthesis)
Methionine	L-Homocysteine thiolactone hydrochloride	2210	Precursor for L-[^{11}C]Methyl-methionine, - ethionine, and -propionine
Methionine	L-Methionine	2220	Reference standard for L-[^{11}C]Methyl-methionine
Methionine	D-Methionine	2229	Reference standard for D-[^{11}C]Methyl-methionine
Methionine	D,L-Methionine	2230	Reference standard for D,L-[^{11}C]Methyl-methionine
Methyl tosylate	Fluoromethyl tosylate	6194	Reference standard for 1-[^{18}F]Fluoromethyl tosylate
Methylphenidate	D-threo-N-NPS-Ritalinic acid	1592	Precursor for D-threo-[^{11}C]Methylphenidate
Methylphenidate	D-threo-Methylphenidate hydrochloride	1593	Reference standard for D-threo-[^{11}C]Methylphenidate
Metomidate	(R)-Metomidate hydrochloride	1760	Reference standard for [^{11}C]Metomidate
Metomidate	(S)-Metomidate hydrochloride	1762	Reference standard for [^{11}C]Metomidate
Metomidate	(R)-Desethyl-Etomidate	1780	Precursor for [^{11}C]Metomidate, [^{11}C]Etomidate, and (R)-[^{18}F]FETO

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Tracer	Product related to the tracer	Product number	Product use
Metomidate	(S)-Desethyl-Etomidate	1782	Precursor for [^{11}C]Metomidate and [^{11}C]Etomidate and (S)-[^{18}F]FETO
MFBG hydrochloride	MFBG pinacol boronate precursor	7033	Precursor for meta-[^{18}F]Fluorobenzylguanidine
MFBG hydrochloride	MFBG hydrochloride	7034	Precursor for meta-[^{18}F]Fluorobenzylguanidine
MK-8278	Desmethyl-MK-8278	3720	Precursor for [^{11}C]MK-8278
MPPF	Nitro-MPPF	3240	Precursor for [^{18}F]MPPF
MPPF	MPPF	3250	Reference standard for [^{18}F]MPPF
MPT	Desmethyl-MPT	3260	Precursor for [^{11}C]MPT
MPT	MPT	3270	Reference standard for [^{11}C]MPT
n.a.	DCFPyL reference standard	9925	Reference standard for [^{18}F]DCFPyL
Naltrindole	3-O-Benzyl-naltrindole	2800	Precursor for N1´([^{11}C]Methyl)-naltrindole
Naltrindole	N-Methylnaltrindole	2810	Reference standard for N1´([^{11}C]Methyl)-naltrindole
neurokinin receptor	DOTA-Substance P	9960	Precursor for radiometal-labelled neurokinin receptor targeted peptides
NMB	4-(2-Keto-3-methyl-1-benzimidazolinyl)piperidine	2700	Precursor for [^{18}F]NMB
NMB	FNMB	2760	Reference standard for [^{18}F]NMB
NNC112	(+)-Desmethyl-NNC112	1480	Precursor for [^{11}C]NNC112
NNC112	(+)-NNC112	1490	Reference standard for [^{11}C]NNC112
NODAGA-AMBA	NODAGA-AMBA trifluoroacetate	9814	
NODAGA-NOC	NODAGA-NOC acetate	9718	Precursor for radiolabelled peptides
NODAGA-RGD	Ga-NODAGA-RGD	9807	Reference standard for ^{68}Ga-NODAGA-RGD
NODAGA-RGD dimer	NODAGA-RGD dimer acetate	9804	Precursor for radiolabelled NODAGA-RGD dimer
Norbinaltorphimine	Norbinaltorphimine dihydrochloride	4500	
Nosyloxyethane	1,2-Bis(nosyloxy)ethane	6179	Precursor for 1-[^{18}F]Fluoro-2-nosyloxy-ethane
NOTA-AMBA	NOTA-AMBA trifluoroacetate	9815	
NOTA-Octreotide	NOTA-Octreotide trifluoroacetate	9762	Precursor for radiolabelled NOTA-Octreotide
NOTA-octreotide	NOTA-NOC acetate	9765	Precursor for radiometal-labelled NOTA-[1-Nal3]octreotide.
NOTA-RGDfK	NOTA-RGDfK acetate	9802	Precursor for radiolabelled NOTA-RGDfK.
NOTA-RGDfK	Ga-NODAGA-RGD dimer	9803	Reference standard for ^{68}Ga-NODAGA-RGD dimer
NPA and NMA	(R)-(-)-Norapomorphine hydrobromide	1477	Precursor for [^{11}C]-(-)-NPA and [^{11}C]-(-)-NMA
Octreotate	[Tyr^3]Octreotate acetate	9774	
Octreotide	Octreotide acetate	9750	
Octreotide	TETA-Octreotide acetate	9760	Precursor for radiolabelled TETA-Octreotide
Octreotide	NOTA-Octreotide trifluoroacetate	9762	Precursor for radiolabelled NOTA-Octreotide
Octreotide	NOTA-NOC acetate	9765	Precursor for radiometal-labelled NOTA-[1-Nal3]octreotide.
Octreotide	[Tyr^3,Lys^5(Boc)]octreotide acetate	9900	Precursor for N-terminal substituted octreotide analogs
Octreotide	[Lys^5(Boc)]octreotate acetate	9901	Precursor for N-terminal substituted octreotate analogs
Octreotide	[Lys^5(Boc)]lanreotide acetate	9902	Precursor for N-terminal substituted lanreotide analogs
Octreotide	[Nal^3,Lys^5(Boc)]octreotide acetate	9903	Precursor for N-terminal substituted [Nal^3]octreotide analogs
OMFD	OMFD precursor ABX004	1363	Precursor for [^{18}F]OMFD
OMFD	OMFD	1369	Reference standard for [^{18}F]OMFD
opioid receptor	3-O-Trityl-6-O-desmethyl-diprenorphine	2000	Precursor for [^{11}C]Diprenorphine
opioid receptor	Diprenorphine hydrochloride	2010	Reference standard for [^{11}C]Diprenorphine
opioid receptor	Diprenorphine	2020	Reference standard for [^{11}C]Diprenorphine
opioid receptor	6-O-Fluoroethyl-6-O-desmethyl-diprenorphine	2040	Reference standard for [^{18}F]Fluoroethyl-diprenorphine
opioid receptor	GR 89696 fumarate	2070	Reference standard for (R)-(-)-[^{11}C]GR 103545 and (S)-(+)-[^{11}C]GR 103545
opioid receptor	3-O-Benzyl-naltrindole	2800	Precursor for N1´([^{11}C]Methyl)-naltrindole
opioid receptor	N-Methylnaltrindole	2810	Reference standard for N1´([^{11}C]Methyl)-naltrindole
opioid receptor	Norbinaltorphimine dihydrochloride	4500	
Palmitic acid	Pentadecylmagnesium bromide 0.5 M in diethyl ether	831	Reagent for synthesis of [^{11}C]palmitic acid

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Tracer	Product related to the tracer	Product number	Product use
PBR28	PBR28 precursor	1652	Precursor for [^{11}C]-PBR28
PBR28	PBR28 standard	1653	Reference standard for [^{11}C]-PBR28
PD 153035	Desmethyl-PD 153035	5200	Precursor for [Methoxy-^{11}C]PD 153035
PD 153035	PD 153035	5210	Reference standard for [Methoxy-^{11}C]PD 153035
PE2I	PE2I acid	4160	Precursor for [^{11}C]PE2I
PE2I	PE2I tin precursor	4165	Precursor for [^{123}I]PE2I
PE2I	PE2I	4170	Reference standard for [^{11}C]PE2I
PE2I	TEO-PE2I	4172	Precursor for [^{18}F]FE-PE2I
PE2I	FE-PE2I	4173	Referece standard for [^{18}F]FE-PE2I
Pentreotide	Pentreotide trifluoroacetate	9740	Precursor for radiolabelled Pentreotide
PEO	3-O-Trityl-6-O-desmethyl-phenethyl-orvinol	2051	Precursor for [^{11}C]Phenethyl-orvinol
PEO	Phenethyl-orvinol	2052	Reference standard for [^{11}C]Phenethyl-orvinol
PEO	6-O-(2-Fluoroethyl)-6-O-desmethyl-phenethyl-orvinol	2053	Reference standard for [^{18}F]FE-PEO
Peptides	Fmoc-Lys(ivDde)-OH	9500	Amino acid building block for peptide synthesis
Peptides	NODAGA-NOC acetate	9718	Precursor for radiolabelled peptides
PHNO	(+)-9-MeO-HNO hydrochloride	1642	Reference standard for [^{11}C]-(+)-PHNO
PHNO	(+)-HNO hydrochloride	1643	Precursor for [^{11}C]-(+)-PHNO Precursor for [^{18}F]-(+)-F-PHNO
PHNO	(+)-F-PHNO	1646	Reference standard [^{18}F]-(+)-F-PHNO
PHNO	(+)-HNO hydrochloride (GMP)	1647	Precursor for [^{11}C]-(+)-PHNO Precursor for [^{18}F]-(+)-F-PHNO
PHNO	(+)-PHNO hydrochloride	1645	Reference standard for [^{11}C]-(+)-PHNO
PiB	6-OH-BTA-0	5100	Precursor for [N-Methyl-^{11}C]-6-OH-BTA-1
PiB	6-OH-BTA-0	5100	Precursor for [N-Methyl-^{11}C]-6-OH-BTA-1
PiB	6-OH-BTA-0 (GMP)	5101	Precursor for [N-Methyl-^{11}C]-6-OH-BTA-1
PiB	6-OH-BTA-0 (GMP)	5101	Precursor for [N-Methyl-^{11}C]-6-OH-BTA-1
PiB	6-MOMO-BTA-0	5110	Precursor for [N-Methyl-^{11}C]-6-OH-BTA-1
PiB	6-MOMO-BTA-0	5110	Precursor for [N-Methyl-^{11}C]-6-OH-BTA-1
PiB	6-MOMO-BTA-0 (GMP)	5111	Precursor for [N-Methyl-^{11}C]-6-OH-BTA-1
PiB	6-MOMO-BTA-0 (GMP)	5111	Precursor for [N-Methyl-^{11}C]-6-OH-BTA-1
PiB	6-OH-BTA-1 hydrochloride	5120	Reference standard for [N-Methyl-^{11}C]-6-OH-BTA-1
PiB	6-OH-BTA-1 hydrochloride	5120	Reference standard for [N-Methyl-^{11}C]-6-OH-BTA-1
PiB	6-MeO-BTA-0	5130	Reference standard for [O-Methyl-^{11}C]6-MeO-BTA-0
PiB	6-MeO-BTA-0	5130	Reference standard for [O-Methyl-^{11}C]6-MeO-BTA-0
PiB	6-OH-BTA-1 (free base)	5140	Reference standard for [N-Methyl-^{11}C]-6-OH-BTA-1
PiB	6-OH-BTA-1 (free base)	5140	Reference standard for [N-Methyl-^{11}C]-6-OH-BTA-1
Pittsburgh Comp. B	6-OH-BTA-0	5100	Precursor for [N-Methyl-^{11}C]-6-OH-BTA-1
Pittsburgh Comp. B	6-OH-BTA-0 (GMP)	5101	Precursor for [N-Methyl-^{11}C]-6-OH-BTA-1
Pittsburgh Comp. B	6-MOMO-BTA-0	5110	Precursor for [N-Methyl-^{11}C]-6-OH-BTA-1
Pittsburgh Comp. B	6-MOMO-BTA-0 (GMP)	5111	Precursor for [N-Methyl-^{11}C]-6-OH-BTA-1
Pittsburgh Comp. B	6-OH-BTA-1 hydrochloride	5120	Reference standard for [N-Methyl-^{11}C]-6-OH-BTA-1
Pittsburgh Comp. B	6-MeO-BTA-0	5130	Reference standard for [O-Methyl-^{11}C]6-MeO-BTA-0
Pittsburgh Comp. B	6-OH-BTA-1 (free base)	5140	Reference standard for [N-Methyl-^{11}C]-6-OH-BTA-1
PK11195	(R)-N-Desmethyl PK11195	1600	Precursor for (R)-[N-Methyl-^{11}C-]PK11195
PK11195	(S)-PK 11195	1609	Reference standard for analytical detection of (S)-[N-Methyl-^{11}C]PK11195.
PK11195	(R)-PK11195	1610	Reference standard for (R)-[N-Methyl-^{11}C]PK11195
PK11195	(R,S)-PK11195	1611	Reference standard for (R,S)-[N-Methyl-^{11}C]PK11195
PK11195	(S)-N-Desmethyl PK11195	1620	Precursor for (S)-[N-Methyl-^{11}C-]PK11195
PK11195	(R,S)-N-Desmethyl PK11195	1640	Precursor for (R,S)-[N-Methyl-^{11}C-]PK11195
PMP / AChE	Propionic acid piperidin-4-yl ester hydrochloride	2130	Precursor for [^{11}C]PMP
PMP / AChE	Propionic acid 1-methyl-piperidin-4-yl ester hydrochloride	2140	Reference standard for [^{11}C]PMP
Proline	N-Boc-trans-4-tosyloxy-L-proline methyl ester	2300	Precursor for cis-4-[^{18}F]Fluoro-L-proline
Proline	N-Boc-trans-4-mesyloxy-D-proline tert-butyl ester	2301	Precursor for cis-4-[^{18}F]Fluoro-D-proline

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Tracer	Product related to the tracer	Product number	Product use
Proline	N-Boc-cis-4-tosyloxy-L-proline methyl ester	2310	Precursor for trans-4-[^{18}F]Fluoro-L-proline
Proline	cis-4-Fluoro-L-proline	2320	Reference standard for cis-[^{18}F]Fluoro-L-proline
Proline	cis-4-Fluoro-D-proline hydrochloride	2321	Reference standard for cis-4-[^{18}F]Fluoro-D-proline
Proline	trans-4-Fluoro-L-proline	2330	Reference standard for trans-[^{18}F]Fluoro-L-proline
Propargyldieth. glycol	Tosyl-propargyl-diethylene glycol	6305	Precursor for [^{18}F]Fluoro-propargyl-diethylene glycol
Propargyldieth. glycol	Tosyl-propargyl-triethylene glycol	6307	Precursor for [^{18}F]Fluoro-propargyl-triethylene glycol
Propargyldieth. glycol	Fluoro-propargyl-triethylene glycol	6308	Reference standard for [^{18}F]Fluoro-propargyl-triethylene glycol
Propionine	L-Homocysteine thiolactone hydrochloride	2210	Precursor for L-[^{11}C]Methyl-methionine, - ethionine, and -propionine
Propoxybenzene	3-(4-Azidophenoxy)propyl methansulfonate	6320	Precursor for 1-Azido-4-(3-[^{18}F]fluoro-propoxy)-benzene
Propranolol	(S)-N-Desisopropylpropranolol	2550	Precursor for [^{11}C] and [^{18}F]Propranolol
Propyltosylate	3-Fluoropropyltosylate	6190	Reference standard for 3-[^{18}F]Fluoropropyltosylate
PSMA	PSMA-11 (GMP)	9919	Precursor for [^{68}Ga]GaPSMA-11
PSMA	PSMA-11	9920	Precursor for [^{68}Ga]GaPSMA-11
PSMA	PSMA-11 (GMP)	9921	Precursor for [^{68}Ga]GaPSMA-11
PSMA	GaPSMA-11	9922	Reference standard for [^{68}Ga]GaPSMA-11
PSMA	PSMA-10	9923	Precursor for [^{68}Ga]GaPSMA-10
PSMA	PSMA-617	9933	Precursor for [^{68}Ga/^{177}Lu/^{90}Y]PSMA-617
PSMA	PSMA-617 (GMP)	9934	Precursor for [^{68}Ga/^{177}Lu/^{90}Y]PSMA-617
PSMA	GaPSMA-617	9935	Reference standard for [68Ga]GaPSMA-617
PSMA	LuPSMA-617	9936	Reference Standard for [^{177}Lu]LuPSMA-617
PSMA	deprotected DCFPyL precursor	9941	Precursor for [^{18}F]DCFPyL
PSMA	PSMA-1007 precursor	9943	Precursor for [^{18}F]PSMA-1007
PSMA	PSMA-1007 reference standard	99433	Reference Standard for [^{18}F]PSMA-1007
Raclopride	(S)-O-Desmethylraclopride hydrobromide	1500	Precursor for [^{11}C]Raclopride
Raclopride	(R)-O-Desmethylraclopride hydrobromide	1501	Precursor for [^{11}C]Raclopride
Raclopride	(R,S)-O-Desmethylraclopride hydrobromide	1502	Precursor for [^{11}C]Raclopride
Raclopride	(S)-O-Desmethylraclopride	1510	Precursor for [^{11}C]Raclopride
Raclopride	Raclopride	1520	Reference standard for [^{11}C]Raclopride
Re-188-Labelling	MIBI	7200	Ligand for labelling with ^{99m}Tc or ^{188}Re
Re-188-Labelling	Copper tetraMIBI tetrafluoroborate $[Cu(MIBI)_4]BF_4$	7210	Ligand for labelling with ^{99m}Tc or ^{188}Re
Re-188-Labelling	Copper tetraMIBI tetrafluoroborate (GMP)	7211	Ligand for labelling with ^{99m}Tc or ^{188}Re
Reboxetine	(2S,3S)-N-Boc-carboxylreboxetine	4402	Precursor for [^{11}C]Methylreboxetinecarboxylate
Reboxetine	(2S,3S)-Carboxylreboxetine fluoroethyl ester trifluoroacetate	4403	Reference standard for [^{18}F]Fluoroethylreboxetinecarboxylate
Reboxetine	Methylreboxetinecarboxylate	4405	Reference standard for [^{11}C]Methylreboxetinecarboxylate
reducing agent	Lithium Aluminium Hydride in THF bulk	801	1 M solution in dried tetrahydrofuran with controlled ^{12}C-background
reducing agent	Lithium aluminium hydride (0.1 M in THF)	802	0.1 M solution in dried tetrahydrofuran with controlled ^{12}C-background
reducing agent	Lithium aluminium hydride (0.25 M in THF)	803	0.25 M solution in dried tetrahydrofuran with controlled ^{12}C-background
reducing agent	Lithium aluminium hydride (0.05 M in THF)	804	0.05 M solution in dried tetrahydrofuran with controlled ^{12}C-background
reducing agent	Lithium aluminium hydride (0.1 M in THF)	832	0.1 M solution in dried tetrahydrofuran with controlled ^{12}C-background
RGD peptides	NODAGA-RGD trifluoroacetate	9805	Precursor for radiolabelled RGD peptides
RGD peptides	NODAGA-RGD (GMP)	9806	Precursor for radiometal-labelled RGD-peptide.
RGD peptides	Ga-NODAGA-RGD	9807	Reference standard for ^{68}Ga-NODAGA-RGD
RGD peptides	DOTA-RGDfK dimer acetate	9862	Precursor for radiometal-labelled RGD-peptide.
RGD peptides	DTPA-Bn-cyclo(RDGfK) dimer trifluoroacetate	9866	Precursor for $\alpha_v\beta_3$ integrin targeted, radiometal-labelled RGD-peptides
RGD peptides	HYNIC-cyclo(RGDfK) dimer trifluoroacetate	9867	Precursor for $\alpha_v\beta_3$ integrin targeted, ^{99m}Tc-labelled RGD-peptides
RGDfK	NOTA-RGDfK acetate	9802	Precursor for radiolabelled NOTA-RGDfK.
RGDfK	Ga-NODAGA-RGD dimer	9803	Reference standard for ^{68}Ga-NODAGA-RGD dimer

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Tracer	Product related to the tracer	Product number	Product use
RGDfK	Cyclo-RGDfK	9860	Integrin targeting sequence.
RGDfK	Cyclo-RGDfK dimer trifluoroacetate	9861	Integrin targeting sequence.
Rifampicin	N-Demethylrifampicin	5700	Precursor for [^{11}C]Rifampicin
Ro15-4513	Azidomazenil	1680	Reference standard for [^{11}C]Ro15-4513
Ro15-4513	Desmethylazidomazenil	1681	Precursor for [^{11}C]Ro15-4513
Rolipram	Rolipram	6000	Reference standard for [^{11}C]Rolipram
Rolipram	(S)-(+)-Rolipram	6010	Reference standard for [^{11}C]-(S)-Rolipram
Rolipram	(R)-(-)-Rolipram	6020	Reference standard for [^{11}C]-(R)-Rolipram
Rolipram	Desmethyl-Rolipram	6030	Precursor for [^{11}C]Rolipram
Rolipram	(S)-(+)-Desmethyl-Rolipram	6040	Precursor for S-(+)-[^{11}C]Rolipram
Rolipram	(R)-(-)-Desmethyl-Rolipram	6050	Precursor for R-(-)-[^{11}C]Rolipram
SB207145	SB206453	1880	Precursor for [^{11}C]SB207145
SB207145	SB206453 (GMP)	1881	Precursor for [^{11}C]SB207145
SB207145	SB207145	1882	Reference standard for [^{11}C]SB207145
SCH-23388	(S)-SCH-24518 hydrochloride	1462	Precursor for [^{11}C]SCH-23388
SCH-23388	SCH-23388 hydrochloride	1466	Reference standard for [^{11}C]SCH-23388
SCH-23390	(R)-SCH-24518 hydrochloride	1460	Precursor for [^{11}C]SCH-23390
SCH-23390	SCH-23390 hydrochloride	1464	Reference standard for [^{11}C]SCH-23390
SCH-442416	Desmethyl-SCH-442416	3700	Precursor for [^{11}C]SCH 442416
SCH-442416	SCH-442416	3710	Reference standard for [^{11}C]SCH 442416
Setoperone	Nitro-Setoperone	1820	Precursor for [^{18}F]Fluoro-Setoperone
Setoperone	Setoperone	1830	Reference standard for [^{18}F]Fluoro-Setoperone
SFB	SFB	4392	Reference standard for [^{18}F]SFB
SGMIB	SGMIB Standard	7014	Standard for [^{131}I]SGMIB
SGMIB	SGMIB Precursor	7015	Precursor for [^{131}I]SGMIB
sigma receptor	ISOM	3590	Precursor for (N-[4-(6,7-Dimethoxy-3,4-dihydro-1H-isoquinolin-2-yl)-butyl]-2-(2-[^{18}F]fluoro-ethoxy)-5-methyl-benzamide
sigma receptor	ISOF	3591	Reference standard for (N-[4-(6,7-Dimethoxy-3,4-dihydro-1H-isoquinolin-2-yl)-butyl]-2-(2-[^{18}F]fluoro-ethoxy)-5-methyl-benzamide
somatostatin	Octreotide acetate	9750	
Somatostatin	[Nal^3]Octreotide acetate	9752	Potent somatostatin analog
somatostatin	[Nal^3]Octreotide acetate	9752	Potent somatostatin analog
Somatostatin	[Tyr^3]Octreotide acetate	9810	Potent somatostatin analog
Somatostatin	Lanreotide trifluoroacetate	9820	Potent somatostatin agonist, selective for somatostatin receptor subtype 2
somatostatin receptor	DOTATOC (GMP)	9702	Precursor for radiolabelled DOTA-TOC
somatostatin receptor	DOTA-NOC acetate	9712	Precursor for radiolabelled DOTA-NOC
somatostatin receptor	DOTA-NOC acetate (GMP)	9716	Precursor for radiolabelled DOTA-NOC
somatostatin receptor	Pentreotide trifluoroacetate	9740	Precursor for radiolabelled Pentreotide
somatostatin receptor	DTPA-TOC trifluoroacetate	9744	Precursor for radiolabelled DTPA-TOC
somatostatin receptor	TETA-Octreotide acetate	9760	Precursor for radiolabelled TETA-Octreotide
somatostatin receptor	Lanreotide trifluoroacetate	9820	Potent somatostatin agonist, selective for somatostatin receptor subtype 2
somatostatin receptor	DOTA-Lanreotide acetate	9831	Precursor for radiolabelled DOTA-Lanreotide
somatostatin receptor	5(6)-FAM-TATE	9908	fluorescent dye-labelled somatostatin receptor agonist.
Spiperone	N-Mesitylenesulfonyloxy-ethyl-spiperone	1590	Precursor for 3-(2´-[^{18}F]Fluorethyl)spiperone
Spiperone	Fluoroethylspiperone	1591	Reference standard for 3-(2´-[^{18}F]Fluorethyl)spiperone
Talose	Talose Triflate	1140	Precursor for [^{18}F]FDGal
TBZ	(±)-beta-Dihydrotetrabenazine	4731	
TBZ	(±)-Tetrabenazine	4732	Reference standard for [^{11}C]Tetrabenazine
TBZ	(±)-9-O-Desmethyl-tetrabenazine	4733	Precursor for [^{11}C]Tetrabenazine
Tc-99m-Labelling	Mebrofenin	7050	Ligand for labelling with ^{99m}Tc
Tc-99m-Labelling	Disofenin	7060	Ligand for labelling with ^{99m}Tc
Tc-99m-Labelling	Succinimidyl-N-Boc-Hynic	7080	Ligand for labelling with ^{99m}Tc
Tc-99m-Labelling	Succinimidyl-Hynic hydrochloride	7090	Ligand for labelling with ^{99m}Tc
Tc-99m-Labelling	S-Benzoyl-MAG-3	7100	Ligand for labelling with ^{99m}Tc
Tc-99m-Labelling	MAG 3	7110	Ligand for labelling with ^{99m}Tc
Tc-99m-Labelling	BMEDA	7150	Ligand for labelling with ^{99m}Tc
Tc-99m-Labelling	MDP	7160	Ligand for labelling with ^{99m}Tc
Tc-99m-Labelling	HMDP	7161	Ligand for labelling with ^{99m}Tc

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Tracer	Product related to the tracer	Product number	Product use
Tc-99m-Labelling	MIBI	7200	Ligand for labelling with ^{99m}Tc or ^{188}Re
Tc-99m-Labelling	Copper tetraMIBI tetrafluoroborate $[Cu(MIBI)_4]BF_4$	7210	Ligand for labelling with ^{99m}Tc or ^{188}Re
Tc-99m-Labelling	Copper tetraMIBI tetrafluoroborate (GMP)	7211	Ligand for labelling with ^{99m}Tc or ^{188}Re
Tc-99m-Labelling	Zinc-TBI	7220	Ligand for labelling with ^{99m}Tc
Tc-99m-Labelling	EC	7250	Ligand for labelling with ^{99m}Tc
Tc-99m-Labelling	ECD	7260	Ligand for labelling with ^{99m}Tc
Tc-99m-Labelling	Tetrofosmin	7310	Complexation agent for [^{99m}Tc]-Labelling
Tc-99m-Labelling	TRODAT	7400	Ligand for labelling with ^{99m}Tc
Technetium	TRODAT	7400	Ligand for labelling with ^{99m}Tc
TETA-Ocreotide	TETA-Octreotide acetate	9760	Precursor for radiolabelled TETA-Octreotide
Tetrabenazine	(±)-9-O-Desmethyl-α-dihydrotetrabenazine	4700	Precursor for [^{11}C]DTBZ
Tetrabenazine	(+)-9-O-Desmethyl-α-dihydrotetrabenazine	4710	Precursor for (+)-[^{11}C]DTBZ
Tetrabenazine	(-)-9-O-Desmethyl-α-dihydrotetrabenazine	4720	Precursor for (-)-[^{11}C]DTBZ
Tetrabenazine	(±)-α-Dihydrotetrabenazine	4730	Reference standard for [^{11}C]Dihydrotetrabenazine
Tetrabenazine	(±)-beta-Dihydrotetrabenazine	4731	
Tetrabenazine	(±)-Tetrabenazine	4732	Reference standard for [^{11}C]Tetrabenazine
Tetrabenazine	(±)-9-O-Desmethyl-tetrabenazine	4733	Precursor for [^{11}C]Tetrabenazine
Tetrofosmin	Disodium sulfosalicylate	7312	Reagent for the preparation of [^{99m}Tc]Tetrofosmin
Thiadiazine	Aminothiadiazine	4900	Precursor for [^{18}F]Thiadiazine
Thiadiazine	Chlorothiadiazine	4910	Precursor for [^{18}F]Thiadiazine
Thymidine	DMTr-lyxothymidine	1180	Precursor for [^{18}F]FLT
Thymidine	DMTr-Nosyl-lyxothymidine	1190	Precursor for [^{18}F]FLT
Thymidine	Dimethoxybenzyl-FLT precursor	1200	Precursor for [^{18}F]FLT
Thymidine	Anhydrothymidine-FLT precursor	1210	Precursor for [^{18}F]FLT
Thymidine	FLT Ultra Pure	1219	Reference standard for [^{18}F]FLT
Thymidine	3´-Fluoro-thymidine (FLT)	1220	Reference standard for [^{18}F]FLT
Thymidine	5´-O-Benzoyl-2,3´-anhydrothymidine	1230	Precursor for [^{18}F]FLT
Thymidine	5´-O-Benzoyl-2,3´-anhydrothymidine (GMP)	1231	Precursor for [^{18}F]FLT
Thymidine	3-N-Boc-5´-O-dimethoxytrityl-3´-O-nosyl-thymidine	1240	Precursor for [^{18}F]FLT
Thymidine	3-N-Boc-5´-O-dimethoxytrityl-3´-O-nosyl-thymidine (GMP)	1241	Precursor for [^{18}F]FLT
Thymidine	DEMM	1280	Precursor for 2-[^{11}C]Thymidine
Thymidine	Thymidine	1290	Reference standard for 2-[^{11}C]Thymidine
Thyroid hormone	Thyronamine Hydrochloride	3035	Metabolite of thyroid hormone
Thyroid hormone	3-Iodothyronamine Hydrochloride	3036	Metabolite of thyroid hormone
Thyronamine	Thyronamine Hydrochloride	3035	Metabolite of thyroid hormone
Thyronamine	3-Iodothyronamine Hydrochloride	3036	Metabolite of thyroid hormone
TNB	TNB-Androstanone	1919	Precursor [^{18}F]17β-Hydroxy-7α-fluoro-5α-androstan-3-one
TOCA	Gluc-[Lys^0,Lys(ivDde)^5]-TOCA	9771	Precursor for Gluc-Lys([^{18}F]FP)-TOCA
TOCA	Gluc-Lys(FP)-TOCA	9778	Reference standard for Gluc-Lys([^{18}F]FP)-TOCA
Tosyloxybutane	Bis(tosyl)-1,4-butanediol	6185	Precursor for 1-[^{18}F]Fluoro-4-tosyloxy-butane
Tosyloxybutyne	1,4-Bis(tosyloxy)but-2-yne	6186	Precursor for 1-[^{18}F]Fluoro-4-tosyloxy-but-2-yne
Tosyloxypropane	1,3-Propane-di-tosylate	6191	Precursor for 1-[^{18}F]Fluoro-3-tosyloxy-propane
Tryptophan	Dimethyl-8-acetyl-hexahydropyrrolo[2,3]indol-1,2-dicarboxylate	6500	Precursor for α-[^{11}C]Methyl-L-tryptophan
Tryptophan	α-Methyl-L-tryptophan	6510	Reference standard for α-[^{11}C]Methyl-L-tryptophan
Tryptophan	Dimethyl-8-phenylsulfonyl-5-phenylsulfonyloxy-hexahydropyrrolo[2,3]indol-1,2-dicarboxylate	6520	Precursor for 5-OH-α-[^{11}C]Methyl-L-tryptophan

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Tracer	Product related to the tracer	Product number	Product use
Ubiquicidin	Ubiquicidin (29-41) acetate	9600	Precursor for [^{99m}Tc]Ubiquicidin (29-41)
Ubiquicidin	DOTA-Ubiquicidin (29-41) acetate	9601	Precursor for Infection Imaging Agents
Ubiquicidin	Scrambled Ubiquicidin (29-41)	9602	
Ubiquicidin	NOTA-Ubiquicidin (29-41) acetate	9603	Precursor for Infection Imaging Agents
Uracil	FTRU	2880	Precursor for 5-[^{131}I]Iodo- and 5-[^{211}At]Astato 1-(2-deoxy-2-fluoro-β-D-ribofuranosyl)uracil
Uracil	5-Fluorouracil precursor	2958	Precursor for [^{18}F]-5-FU
Uridine	2´-Deoxy-L-uridine	2950	
Verapamil	Norverapamil	5600	Precursor for [^{11}C]Verapamil
Verapamil	(-)-Norverapamil	5620	Precursor for (-)-[^{11}C]Verapamil
Verapamil	(+)-Verapamil hydrochloride	5630	Reference standard for (+)-[^{11}C]Verapamil
WAY 100635	WAY 100634	3200	Precursor for [^{11}C-carbonyl]-WAY 100635
WAY 100635	WAY 100635	3210	Reference standard for [^{11}C-carbonyl]-WAY 100635
WAY 100635	Desmethyl-WAY100635	3220	Precursor for [^{11}C]-WAY 100635
WAY 100635	Desmethyl-WAY 100634	3230	Precursor for [^{11}C-carbonyl]-DesmethylWAY100635
Xeloda	Nitro-Xeloda	2952	Precursor for [^{18}F]Xeloda
Xeloda	Xeloda	2953	Reference standard for [^{18}F]Xeloda
Zr-89 Labelling	TFP-N-sucDf-Fe	7270	Precursor for mAb-N-sucDf-^{89}Zr

Molecular Formula Index

Molecular Formula	Name	Product Number
$C_2H_2F_KO_2$	Potassium fluoroacetate	6210
$C_2H_2FNaO_2$	Sodium fluoroacetate	6211
$C_2H_4Br_2$	Dibromoethane	6175
$C_3H_{4Br}F_3O_3S$	2-Bromoethyl triflate	6182
$C_4H_7NOS \cdot HCl$	L-Homocysteine thiolactone hydrochloride	2210
$C_4H_9NO_2S$	L-Homocysteine	2200
$C_4H_9NO_2S$	D,L-Homocysteine	2205
$C_4H_{11}NO$	Dimethylaminoethanol	6100
$C_5H_8FNO_2$	cis-4-Fluoro-L-proline	2320
$C_5H_8FNO_2$	trans-4-Fluoro-L-proline	2330
$C_5H_9ClFNO_2$	cis-4-Fluoro-D-proline hydrochloride	2321
$C_5H_{11}NO_2S$	L-Methionine	2220
$C_5H_{11}NO_2S$	D-Methionine	2229
$C_5H_{11}NO_2S$	D,L-Methionine	2230
$C_5H_{13}ClFNO$	Fluoromethylcholine chloride	6130
$C_5H_{14}ClNO$	Choline chloride	6150
$C_5H_{14}INO$	Choline iodide	6170
$C_5H_{13Br2}NO$	Bromocholine bromide	6141
$C_5H_{13Br}FNO$	Fluoromethylcholine bromide	6140
$C_6H_8N_3O_3F$	Fluoromisonidazole	1410
$C_6H_9N_3O_4$	Desmethylmisonidazole	1420
$C_6H_{11}ClO_5$	ClDG	1110
$C_6H_{11}FO_5$	FDG	1100
$C_6H_{11}FO_5$	6-Deoxy-6-fluoro-D-glucopyranose	1108
$C_6H_{11}FO_5$	FDM	1120
$C_6H_{11}FO_5$	FDGal	1150
$C_6H_{11}NO$	MIBI	7200
$C_6H_{11}O_7P$	PMPA	9510
$C_6H_{15}ClFNO$	Fluoroethylcholine chloride	6160
$C_6H_{15}FNO \cdot C_7H_7O_3S$	Fluoroethylcholine tosylate	6120
$C_6H_{18}Cl_3N_3$	TACN	7281
$C_6H_{20}N_2O_{12}P_4 \cdot xH_2O$	EDTMP	7165
$C_6H_{14Br}NO$	DMMB	6173
$C_7H_4Na_2O_6S \cdot 3\ H_2O$	Disodium sulfosalicylate	7312
$C_7H_9FN_4O_3$	N-(2-Fluoroethyl)-2-(2-nitroimidazol-1-yl)acetamide	1454
$C_7H_{10}Cl_2N_2O_2S_2$	Chlorothiadiazine	4910
$C_7H_{10}FN_3O_4$	FETNIM	1440
$C_7H_{12}ClN_3O_2S_2$	Aminothiadiazine	4900
$C_7H_{13}NO_2 \cdot HCl$	Acetic acid piperidin-4-yl ester hydrochloride	2110
$C_7H_{14}N_6S_2$	PTSM	1456
$C_8H_9F_3N_2O_4$	FBEM precursor	4398
$C_8H_9FO_3S$	Fluoromethyl tosylate	6194
$C_8H_{10}FN_3O_5$	1-(5-Deoxy-5-fluoro-α-D-arabinofuranosyl)-2-nitroimidazole	1451
$C_8H_{10}FNO_2$	6-Fluorodopamine	1380
$C_8H_{10}IN_3 \cdot {}^1/_2\ H_2SO_4$	MIBG Hemisulfate	7000

$C_8H_{10}IN_3 \cdot {}^1/_2\ H_2SO_4$	MIBG Hemisulfate (GMP)	7001
$C_8H_{11}ClFN_3$	MFBG hydrochloride	7034
$C_8H_{13}N_3O_5S$	MAG 3	7110
$C_8H_{14}CuN_6S_2$	CuATSM	1457
$C_8H_{14}N_6NiS_2$	NiATSM	1459
$C_8H_{15}NO_2 \cdot HCl$	Acetic acid 1-methyl-piperidin-4-yl ester hydrochloride	2120
$C_8H_{15}NO_2 \cdot HCl$	Propionic acid piperidin-4-yl ester hydrochloride	2130
$C_8H_{16}N_2O_4S_2$	EC	7250
$C_8H_{16}N_6S_2$	ATSM	1455
$C_8H_{20}N_4$	Cyclen	7290
$C_8H_{8Br}NO_5S$	2-Bromoethyl nosylate	6181
$C_9H_8O_3S$	(Benzoylmercapto)acetic acid	7111
$C_9H_{10}FIN_2O_5$	FIAU	2910
$C_9H_{10}FIN_2O_5$	FIRU	2922
$C_9H_{10}FNO_3$	2-Fluoro-tyrosine	3010
$C_9H_{10}FNO_3$	2-Fluoro-m-Tyrosine	3130
$C_9H_{10}FNO_4 \cdot HCl$	6-Fluoro-L-DOPA hydrochloride	1310
$C_9H_{10}FNO_4 \cdot HCl$	6-Fluoro-D,L-DOPA hydrochloride	1311
$C_9H_{10}INO_3$	2-Iodo-tyrosine	3020
$C_9H_{11}FN_2O \cdot C_4H_6O_6$	FAP tartrate	3340
$C_9H_{11}FN_2O_4$	3′-Fluoro-2′,3′-dideoxyuridine	2940
$C_9H_{11}FN_2O_5$	FAU	2900
$C_9H_{11}FN_2O_5$	FUdR	2920
$C_9H_{11}FO_3S$	2-Fluoroethyl tosylate	6184
$C_9H_{11}IN_2O \cdot {}^5/_2\ C_2HF_3O_2$	IAP	3310
$C_9H_{11}IN_2O_5$	IUdR	2949
$C_9H_{11}NO_5$	6-Hydroxy-D,L-DOPA	1332
$C_9H_{12}FN_3O_4$	FAC	2930
$C_9H_{12}FN_3O_4$	αFAC	2931
$C_9H_{12}N_2O_5$	2′-Deoxy-L-uridine	2950
$C_9H_{12}N_2O_{10}S$	6-Nitro-L-DOPA hydrogensulfate	1337
$C_9H_{13}NO_2$	Metaraminol (free base)	3380
$C_9H_{13}NO_2 \cdot C_4H_6O_6$	Metaraminol bitartrate	3390
$C_9H_{15}FO_3$	Fluoro-propargyl-triethylene glycol	6308
$C_9H_{16}O_5$	DEMM	1280
$C_9H_{17}NO_2 \cdot HCl$	Propionic acid 1-methyl-piperidin-4-yl ester hydrochloride	2140
$C_9H_{17}NO_2 \cdot HCl$	Butyric acid piperidin-4-yl ester hydrochloride	2150
$C_9H_{11Br}O_3S<$	2-Bromoethyl tosylate	6183
$C_{10}H_1FN_2O_4$	FLT Ultra Pure	1219
$C_{10}H_9NO_3$	Cyclopropyl-p-nitrophenyl ketone	2750
$C_{10}H_{10}FNO$	FPyKYNE	4397
$C_{10}H_{10}N_4O_4 \cdot HCl$	Succinimidyl-Hynic hydrochloride	7090
$C_{10}H_{11}ClFNO_4$	6-Fluoro-Formyl-DOPA HCl	1339
$C_{10}H_{11}ClN_2O_6$	6-Nitro-Formyl-DOPA HCl	1338
$C_{10}H_{12}FNO_4$	OMFD	1369

$C_{10}H_{12}INO_3$	2-Iodo-α-methyl-p-tyrosine	3180
$C_{10}H_{12}INO_3$	3-Iodo-α-methyl-p-tyrosine	3190
$C_{10}H_{12}N_2O_4$	2′,3′-Didehydro-3′-deoxythymidine	2954
$C_{10}H_{12}N_2O_5$	2,2′-Anhydrothymidine	1250
$C_{10}H_{13}FN_2O_4$	3′-Fluoro-thymidine (FLT)	1220
$C_{10}H_{13}FN_2O_5$	2′-Fluoro-thymidine	1260
$C_{10}H_{13}FN_2O_5$	FMAU	2878
$C_{10}H_{13}FN_2O_5$	αFMAU	2879
$C_{10}H_{13}FO_3S$	3-Fluoropropyltosylate	6190
$C_{10}H_{13}IN_2O_4$	3′-Iodo-thymidine	1222
$C_{10}H_{13}N_2 \cdot CF_3O_3S$	CPTMA	4385
$C_{10}H_{13}N_3O_4S$	3-(4-Azidophenoxy)propyl methansulfonate	6320
$C_{10}H_{14}FN_5O_2$	FHBG	2970
$C_{10}H_{14}N_2O_5$	Thymidine	1290
$C_{10}H_{14}NO \cdot CF_3O_3S$	4-Formyl-N,N,N-Trimethylanilinium triflate	9850
$C_{10}H_{15}NO_2 \cdot HCl$	MHED hydrochloride	3400
$C_{10}H_{17}ClN_2O_3$	FBAM precursor	4383
$C_{10}H_{19}NO_2 \cdot HCl$	Butyric acid 1-methyl-piperidin-4-yl ester hydrochloride	2160
$C_{10}H_{21}N_3OSi$	Bis(trimethylsilyl)cytosine	2873
$C_{10}H_{24}N_2S_2$	BMEDA	7150
$C_{10}H_{26}Cl_2N_2O_2$	BHTMEDA	6174
$C_{10}H_{18Br2}N_{2Z}N$	Zinc-TBI	7220
$C_{11}H_5F_4N_3O_4$	2,3,5,6-Tetrafluorophenyl-2-(2-nitroimidazol-1-yl)acetate	1453
$C_{11}H_8FNO_4$	SFB	4392
$C_{11}H_{12}O_3S$	1-Tosyloxy-3-butyne	6301
$C_{11}H_{13}F_3N_2O_3S$	CMTMA	4386
$C_{11}H_{14}FNO_3 \cdot HCl$	FET hydrochloride	3061
$C_{11}H_{14}FNO_3 \cdot HCl$	D-FET hydrochloride	3071
$C_{11}H_{14}O_4S$	(S)-O-Tosyl-1,2-Epoxybutanol	6351
$C_{11}H_{14}O_5S$	Ethyl (p-tosyloxy)acetate	6200
$C_{11}H_{15}FN_2O_5$	L-FEAU	2874
$C_{11}H_{15}FN_2O_5$	α-L-FEAU	2875
$C_{11}H_{15}FN_2O_5$	FEAU	2876
$C_{11}H_{15}FN_2O_5$	αFEAU	2877
$C_{11}H_{15}NO_4 \cdot HCl$	(L)-HET hydrochloride	3081
$C_{11}H_{19}N_3Si \cdot {}^1/_2\ H_2SO_4$	MTMSBG	7010
$C_{11}H_{22}N_2O_2Si$	5-Methyl-2,4-bis[(trimethylsilyl)oxy]pyrimidine	2872
$C_{12}H_{10}N_2O$	Harmol	1753
$C_{12}H_{11}FN_2O_3$	FPyME standard	4394
$C_{12}H_{12}N_2O_2$	(R)-Desethyl-Etomidate	1780
$C_{12}H_{12}N_2O_2$	(S)-Desethyl-Etomidate	1782
$C_{12}H_{14}N_2O_2$	α-Methyl-L-tryptophan	6510
$C_{12}H_{14}O_3S$	1-Tosyloxy-4-pentyne	6302
$C_{12}H_{15}FN_2$	(-)-Flubatine standard	3351
$C_{12}H_{15}FN_2$	(+)-Flubatine standard	3355
$C_{12}H_{15}NO_2 \cdot HCl$	(+)-HNO hydrochloride	1643

$C_{12}H_{15}NO_2 \cdot HCl$	(+)-HNO hydrochloride (GMP)	1647
$C_{12}H_{18}NO_2 \cdot CF_3O_3S$	FB precursor	4391
$C_{12}H_{19}FN_2O_5Sn$	FTRU	2880
$C_{12}H_{19}FN_2O_5Sn$	FTAU	2890
$C_{12}H_{20}N_2O_5Sn$	5-Trimethylstannyl-2′-deoxyuridine	2948
$C_{12}H_{24}N_2O_2Si$	5-Ethyl-2,4-bis[(trimethylsilyl)oxy]pyrimidine	2871
$C_{12}H_{24}N_2O_4S_2 \cdot 2\ HCl$	ECD	7260
$C_{12}H_{33}GaN_4O_{18}$	Gallium Citrate (complex)	7520
$C_{13}H_1N_2OS$	6-OH-BTA-0 (GMP)	5101
$C_{13}H_{10}FN_3O_3$	Flumazenil acid	1720
$C_{13}H_{10}N_2OS$	6-OH-BTA-0	5100
$C_{13}H_{11}FN_2O_3$	FBEM standard	4399
$C_{13}H_{12}N_2O$	Harmine	1755
$C_{13}H_{13}IN_4O_4$ (Free base)	SGMIB Standard	7014
$C_{13}H_{14}N_2O_2 \cdot HCl$	(R)-Metomidate hydrochloride	1760
$C_{13}H_{14}N_2O_2 \cdot HCl$	(S)-Metomidate hydrochloride	1762
$C_{13}H_{15}NO_2$	(S)-N-Desisopropylpropranolol	2550
$C_{13}H_{16}ClFN_2O_3$	5-FEHTP hydrochloride	6532
$C_{13}H_{16}O_3S$	1-Tosyloxy-5-hexyne	6303
$C_{13}H_{17}N_3O$	4-(2-Keto-3-methyl-1-benzimidazolinyl)piperidine	2700
$C_{13}H_{17}NO_2 \cdot HCl$	(+)-9-MeO-HNO hydrochloride	1642
$C_{13}H_{19}N_2O \cdot CF_3O_3S$	[^{18}F]FPyKYNE precursor	4396
$C_{13}H_{21}N_3O_4$	(S)-1-(2-Amino-3-nitrophenoxy)-3-tert-butylamino-propan-2-ol	2590
$C_{13}H_{24}INO_4$	(S)-tert-Butyl 2-((tert-butoxycarbonyl) amino)-4-Iodobutanoat	3191
$C_{14}H_7FN_2$	FPEB standard	3572
$C_{14}H_7N_3O_2$	FPEB precursor	3571
$C_{14}H_{12}FN_3O_3$	Desmethylflumazenil	1700
$C_{14}H_{12}N_2O_{10}S_2$	1,2-Bis(nosyloxy)ethane	6179
$C_{14}H_{12}N_2OS$	6-MeO-BTA-0	5130
$C_{14}H_{12}N_2OS$	6-OH-BTA-1 (free base)	5140
$C_{14}H_{12}N_2OS \cdot HCl$	6-OH-BTA-1 hydrochloride	5120
$C_{14}H_{12}N_6O_3$	Desmethylazidomazenil	1681
$C_{14}H_{14}N_2O$	Desmethyl ABP688	3560
$C_{14}H_{14}N_2O$	Desmethyl ABP688 (GMP)	3561
$C_{14}H_{15}ClINO_2$	3-Iodothyronamine Hydrochloride	3036
$C_{14}H_{15}FN_2O_2$	(R)-Fluoroethyl-Etomidate	1790
$C_{14}H_{16}ClNO_2$	Thyronamine Hydrochloride	3035
$C_{14}H_{16}N_2O_2$	(R)-Etomidate	1770
$C_{14}H_{18}Cl_2N_2O_3$	(S)-O-Desmethylraclopride	1510
$C_{14}H_{18}Cl_2N_2O_3 \cdot HBr$	(S)-O-Desmethylraclopride hydrobromide	1500
$C_{14}H_{18}Cl_2N_2O_3 \cdot HBr$	(R)-O-Desmethylraclopride hydrobromide	1501
$C_{14}H_{18}Cl_2N_2O_3 \cdot HBr$	(R,S)-O-Desmethylraclopride hydrobromide	1502
$C_{14}H_{18}O_5S$	Tosyl-propargyl-diethylene glycol	6305
$C_{14}H_{19}F_3O_{11}S$	Me-4-FDG precursor	1138
$C_{14}H_{19}FO_9$	ACY-FDG	1130
$C_{14}H_{19}N_3O_5$	Nitro-AP	3320

$C_{14}H_{19}NO_2 \cdot HCl$	D-threo-Methylphenidate hydrochloride	1593
$C_{14}H_{19}NO_5$	4-O-Pivaloyl-L-DOPA	1330
$C_{14}H_{20}ClNO_5$	4-O-Pivaloyl-L-DOPA Hydrochloride	1329
$C_{14}H_{20}O_{10}$	1,2,3,4-Tetra-O-acetyl-beta-D-glucopyranose	1131
$C_{15}H_1N_2OS$	6-MOMO-BTA-0 (GMP)	5111
$C_{15}H_{13}F_2N_3O_3$	Fluoroethylflumazenil	1730
$C_{15}H_{14}FN_3O_3$	Flumazenil	1710
$C_{15}H_{14}N_2O_2S$	6-MOMO-BTA-0	5110
$C_{15}H_{14}N_4O_5$	Nitromazenil	1690
$C_{15}H_{14}N_6O_3$	Azidomazenil	1680
$C_{15}H_{15}N_3S$	MASB	4300
$C_{15}H_{15}N_3S$	MASB (GMP)	4301
$C_{15}H_{16}ClN_3S_2$	Desmethyl-CNS 5161	3540
$C_{15}H_{16}N_2O$	ABP688	3570
$C_{15}H_{16}N_2O_2$	(R)-Desisopropylcarazolol	2500
$C_{15}H_{16}N_2O_2$	(S)-Desisopropylcarazolol	2510
$C_{15}H_{16}N_2O_2$	(R,S)-Desisopropylcarazolol	2511
$C_{15}H_{16}O_6S_2$	Bis(tosyloxy)methane	6177
$C_{15}H_{17}FN_2S \cdot x\ HCl$	AFM precursor	4320
$C_{15}H_{17}N_3O_6S$	S-Benzoyl-MAG-3	7100
$C_{15}H_{18}ClNO_2$	Nor-beta-CCIT	4180
$C_{15}H_{18}FNO_2$	(-)-2-beta-Carbomethoxy-3-beta-(4-fluorophenyl)nortropane	4020
$C_{15}H_{18}INO_2$	(-)-2-beta-Carbomethoxy-3-beta-(4-iodophenyl)nortropane	4050
$C_{15}H_{18}INO_2$	beta-CIT acid	4140
$C_{15}H_{18}N_4O_6$	Succinimidyl-N-Boc-Hynic	7080
$C_{15}H_{19}ClN_2O_4$	SB206453	1880
$C_{15}H_{19}ClN_2O_4$	SB206453 (GMP)	1881
$C_{15}H_{19}F_3O_{12}S$	Mannose Triflate, ultra pure	100
$C_{15}H_{19}F_3O_{12}S$	Mannose Triflate, ultra pure	101
$C_{15}H_{19}F_3O_{12}S$	Mannose Triflate, ultra pure	102
$C_{15}H_{19}F_3O_{12}S$	Mannose Triflate PLUS, ultra pure	105
$C_{15}H_{19}F_3O_{12}S$	Mannose Triflate PLUS, ultra pure	107
$C_{15}H_{19}F_3O_{12}S$	Glucose Triflate	1117
$C_{15}H_{19}F_3O_{12}S$	Talose Triflate	1140
$C_{15}H_{19}NO_3$	Desmethyl-Rolipram	6030
$C_{15}H_{19}NO_3$	(S)-(+)-Desmethyl-Rolipram	6040
$C_{15}H_{19}NO_3$	(R)-(-)-Desmethyl-Rolipram	6050
$C_{15}H_{20}Cl_2N_2O_3$	Raclopride	1520
$C_{15}H_{20}FNO_2$	(+)-F-PHNO	1646
$C_{15}H_{21}IN_2O_3$	S-(-)-IBZM	7510
$C_{15}H_{21}NO_2 \cdot HCl$	(+)-PHNO hydrochloride	1645
$C_{15}H_{22}F_3NO_3Sn$	N-Trifluoroacetyl-3,4-dimethoxy-6-trimethylstannyl-phenethylamine	1370
$C_{15}H_{22}F_3NO_5S$	TBAB	4389
$C_{15}H_{22}FN_3O_6$	Xeloda	2953
$C_{15}H_{22}N_2O_3$	S-(-)-BZM	7500
$C_{15}H_{27}NO_7S$	N-Boc-trans-4-mesyloxy-D-proline tert-butyl ester	2301

$C_{15}H_{31}BrMg$	Pentadecylmagnesium bromide 0.5 M in diethyl ether	831
$C_{15}H_{12Br}N_3O_2$	Desmethyl-PD 153035	5200
$C_{15}H_{19Br}N_2O_5$	Mebrofenin	7050
$C_{15}H_{21Br}N_2O_3$	FLB 604	1530
$C_{16}H_{13}F_2N_3O_2S$	[^{18}F]Lansoprazole Precursor	5150
$C_{16}H_{15}NO_2 \cdot HBr$	(R)-(-)-Norapomorphine hydrobromide	1477
$C_{16}H_{16}ClNO \cdot HCl$	(R)-SCH-24518 hydrochloride	1460
$C_{16}H_{16}ClNO \cdot HCl$	(S)-SCH-24518 hydrochloride	1462
$C_{16}H_{17}N_3S$	DASB	4310
$C_{16}H_{17}N_3S$	DASB (GMP)	4311
$C_{16}H_{18}ClN_3S_2$	CNS 5161	3550
$C_{16}H_{18}N_2O_5$	Dimethyl-8-acetyl-hexahydropyrrolo[2,3]indol-1,2-dicarboxylate	6500
$C_{16}H_{18}O_6S_2$	1,2-Bis(tosyloxy)ethane	6180
$C_{16}H_{19}FINO_2$	CITFES	4100
$C_{16}H_{19}FN_2S \cdot x\ HCl$	AFM standard	4330
$C_{16}H_{20}FNO_2$	(-)-2-beta-Carbomethoxy-3-beta-(4-fluorophenyl)tropane	4000
$C_{16}H_{20}INO_2$	(-)-2-beta-Carbomethoxy-3-beta-(4-iodophenyl)tropane	4030
$C_{16}H_{21}ClN_2O_4$	SB207145	1882
$C_{16}H_{21}NO_2$	(-)-2-beta-Carbomethoxy-3-beta-(phenyl)tropane	4060
$C_{16}H_{21}NO_3$	Rolipram	6000
$C_{16}H_{21}NO_3$	(S)-(+)-Rolipram	6010
$C_{16}H_{21}NO_3$	(R)-(-)-Rolipram	6020
$C_{16}H_{22}O_6S$	Tosyl-propargyl-triethylene glycol	6307
$C_{16}H_{23}BrN_2O_3$	FLB 457	1540
$C_{16}H_{23}FN_4O_2$	CPFPX	3751
$C_{16}H_{23}IN_2O_3$	Epidepride	1522
$C_{16}H_{28}N_3O_3 \cdot CF_3O_3S$	[^{18}F]FPyBrA/[^{18}F]FPyME precursor	4393
$C_{16}H_{28}N_4O_8 \cdot H_2O$	DOTA	7300
$C_{16}H_{31}FO_2S$	14-(R,S)-Fluoro-6-thiaheptadecanoic acid	2860
$C_{16}H_{31}IO_2$	16-Iodohexadecanoic acid	7600
$C_{16}H_{14Br}N_3O_2$	PD 153035	5210
$C_{17}H_{14}FN_3$	DFEAN	5010
$C_{17}H_{14}N_2O_4S_2$	6-O-Tosyloxyethyl-CBT	5149
$C_{17}H_{15}NO_5S$	N-(2-Tosyloxyethyl)phthalimide	1452
$C_{17}H_{16}N_2O_5$	5′-O-Benzoyl-2,3′-anhydrothymidine	1230
$C_{17}H_{16}N_2O_5$	5′-O-Benzoyl-2,3′-anhydrothymidine (GMP)	1231
$C_{17}H_{17}NO_2$	rac [^{11}C]-AIB precursor	2340
$C_{17}H_{17}NO_2$	S-[^{11}C]-AIB precursor	2342
$C_{17}H_{18}ClNO \cdot HCl$	SCH-23390 hydrochloride	1464
$C_{17}H_{18}ClNO \cdot HCl$	SCH-23388 hydrochloride	1466
$C_{17}H_{19}FINO_2$	Altropane acid	4200
$C_{17}H_{19}FINO_2 \cdot HCl$	Altropane acid hydrochloride	4201
$C_{17}H_{19}FN_2O_3$	FBAM standard	4384
$C_{17}H_{19}NO_3$	(2S,3S)-Desethylreboxetine	4407
$C_{17}H_{20}O_6S_2$	1,3-Propane-di-tosylate	6191
$C_{17}H_{21}ClFNO_2$	FECNT	4190

$C_{17}H_{21}FINO_2$	CITFE	4110
$C_{17}H_{21}FINO_2$	2-FE-beta-CIT	4150
$C_{17}H_{21}N_3O_7S$	FETNIM precursor	1430
$C_{17}H_{22}N_4O$	Desmethyl-WAY 100634	3230
$C_{17}H_{23}Cl_2N_3O$	(S)-(-)-Normethylcarbamoyl-GR 103545	2060
$C_{17}H_{23}Cl_2N_3O$	(R)-(+)-Normethylcarbamoyl-GR 103545	2061
$C_{17}H_{23}Cl_2N_3O$	Normethylcarbamoyl-GR 89696	2062
$C_{17}H_{28}N_2O_3Sn$	TAP	3300
$C_{17}H_{28}N_3O_3 \cdot CF_3O_3S$	TMA-AP	3350
$C_{17}H_{33}N_5O_{13}P_2$	BPAMD	7320
$C_{17}H_{37}NO_3$	Tetrabutylammonium Hydrogen Carbonate (0.075 M) - Aqueous solution, stabilized with ethanol	808
$C_{18}H_{16}ClNO_2$	(+)-Desmethyl-NNC112	1480
$C_{18}H_{16}FN_3$	DMFEAN	5030
$C_{18}H_{16}IN_3$	CNS 1261	7020
$C_{18}H_{17}N_3O$	DMEAN	5020
$C_{18}H_{18}O_6S_2$	1,4-Bis(tosyloxy)but-2-yne	6186
$C_{18}H_{21}FINO_2$	Altropane	4210
$C_{18}H_{21}FINO_2 \cdot HCl$	Altropane hydrochloride	4211
$C_{18}H_{21}NO_3$	(2S,3S)-Methylreboxetine	4406
$C_{18}H_{22}INO_2$	PE2I acid	4160
$C_{18}H_{22}N_2O_2$	(R)-Carazolol	2520
$C_{18}H_{22}N_2O_2$	(S)-Carazolol	2530
$C_{18}H_{22}N_2O_2$	(R,S)-Carazolol	2540
$C_{18}H_{22}O_6S_2$	Bis(tosyl)-1,4-butanediol	6185
$C_{18}H_{23}F_3O_9S$	MBETG	1118
$C_{18}H_{23}FINO_2$	CITFP	4130
$C_{18}H_{23}FN_4O_8$	DCFPyL reference standard	9925
$C_{18}H_{23}FO_2$	16α-Fluoroestradiol	1910
$C_{18}H_{23}N_3O_7S$	NITTP	1400
$C_{18}H_{23}N_3O_7S$	NITTP (GMP)	1401
$C_{18}H_{23}N_3O_7S$	NITTP (GMP)	1402
$C_{18}H_{24}F_3NO_5Sn$	N-Trifluoroacetyl-5-acetoxy-2-trimethylstannyl-phenylalanine ethyl ester	3100
$C_{18}H_{24}N_4O$	WAY 100634	3200
$C_{18}H_{25}NO_3$	(±)-9-O-Desmethyl-tetrabenazine	4733
$C_{18}H_{25}NO_7S$	N-Boc-trans-4-tosyloxy-L-proline methyl ester	2300
$C_{18}H_{25}NO_7S$	N-Boc-cis-4-tosyloxy-L-proline methyl ester	2310
$C_{18}H_{26}N_2O_5$	Disofenin	7060
$C_{18}H_{27}NO_3$	(±)-9-O-Desmethyl-α-dihydrotetrabenazine	4700
$C_{18}H_{27}NO_3$	(+)-9-O-Desmethyl-α-dihydrotetrabenazine	4710
$C_{18}H_{27}NO_3$	(-)-9-O-Desmethyl-α-dihydrotetrabenazine	4720
$C_{18}H_{36}N_2O_6$	Cryptand 222	800
$C_{18}H_{40}O_4P_2$	Tetrofosmin	7310
$C_{18}H_{44}N_3O_{16}P_3 \cdot x\ H_2O$	PrP9	7284
$C_{19}H_{14}N_2OS$	DBCO-SCN	6221
$C_{19}H_{17}N_7O_2$	Desmethyl-SCH-442416	3700

$C_{19}H_{18}ClNO_2$	(+)-NNC112	1490
$C_{19}H_{19}N_3O_4S$	ASEM precursor	3371
$C_{19}H_{20}FNS \cdot C_{20}H_{18}O_8$	(+)-Fluoromethyl-McN 5652	4381
$C_{19}H_{20}N_2O_4S$	D-threo-N-NPS-Ritalinic acid	1592
$C_{19}H_{21}N_3O_{10}S$	1-(2,3-Diacetyl-5-tosyl-(α-D-arabinofuranosyl)-2-nitroimidazole	1450
$C_{19}H_{21}NO_4 \cdot CF_3CO_2H$	Methylreboxetinecarboxylate	4405
$C_{19}H_{21}NS \cdot C_{20}H_{18}O_8$	(+)-McN 5652	4370
$C_{19}H_{21}NS \cdot C_{20}H_{18}O_8$	(-)-McN 5652	4380
$C_{19}H_{24}INO_2$	PE2I	4170
$C_{19}H_{25}Cl_2N_3O_3 \cdot C_4H_4O_4$	GR 89696 fumarate	2070
$C_{19}H_{25}Cl_2N_3O_3 \cdot C_4H_4O_4$	(R)-(-)-GR103545 fumarate	2071
$C_{19}H_{25}Cl_2N_3O_3 \cdot C_4H_4O_4$	(S)-(+)-GR89696 fumarate	2072
$C_{19}H_{26}N_4O_{10}$	Nitro-Xeloda	2952
$C_{19}H_{27}FN_2O_2$	Desmethoxyfallypride	1580
$C_{19}H_{27}NO_3$	(±)-Tetrabenazine	4732
$C_{19}H_{27}NO_6$	3,4-Di-O-Pivaloyl-L-DOPA	1328
$C_{19}H_{29}FO_2$	FDHT standard	1918
$C_{19}H_{29}NO_2Sn$	TMS-CT	4040
$C_{19}H_{29}NO_3$	(±)-α-Dihydrotetrabenazine	4730
$C_{19}H_{29}NO_3$	(±)-beta-Dihydrotetrabenazine	4731
$C_{20}H_{18}N_2O_3$	PBR28 precursor	1652
$C_{20}H_{19}ClN_2O$	(R)-N-Desmethyl PK11195	1600
$C_{20}H_{19}ClN_2O$	(S)-N-Desmethyl PK11195	1620
$C_{20}H_{19}ClN_2O$	(R,S)-N-Desmethyl PK11195	1640
$C_{20}H_{19}N_7O_2$	SCH-442416	3710
$C_{20}H_{21}F_3N_6O$	Desmethyl-GR 205171	3500
$C_{20}H_{21}F_3N_6O \cdot 2\ HCl$	Desmethyl-GR 205171 Dihydrochloride	3520
$C_{20}H_{22}FNO_4 \cdot C_2HF_3O_2$	(2S,3S)-Carboxylreboxetine fluoroethyl ester trifluoroacetate	4403
$C_{20}H_{23}NO$	Norbenztropine	4230
$C_{20}H_{25}FINO_2$	FE-PE2I	4173
$C_{20}H_{26}O_6S$	MMSE	1900
$C_{20}H_{29}FN_2O_3$	Fallypride	1560
$C_{20}H_{32}IN_3O_2$	(-)-Flubatine precursor	3353
$C_{20}H_{32}IN_3O_2$	(-)-Flubatine precursor (GMP)	3354
$C_{20}H_{32}IN_3O_2$	(+)-Flubatine precursor	3357
$C_{20}H_{32}IN_3O_2$	(+)-Flubatine precursor (GMP)	3358
$C_{21}H_{20}N_2O_3$	PBR28 standard	1653
$C_{21}H_{21}ClN_2O$	(S)-PK 11195	1609
$C_{21}H_{21}ClN_2O$	(R)-PK11195	1610
$C_{21}H_{21}ClN_2O$	(R,S)-PK11195	1611
$C_{21}H_{23}F_3N_6O$	GR 205171	3510
$C_{21}H_{23}F_3N_6O \cdot 2\ HCl$	GR 205171 Dihydrochloride	3530
$C_{21}H_{23}NO_3$	QNB	2830
$C_{21}H_{24}F_2N_2O_2S$	(S)-FPSPPA	2450
$C_{21}H_{24}F_2N_2O_2S$	(R)-FPSPPA	2460
$C_{21}H_{24}FN_3O_2S$	Setoperone	1830

$C_{21}H_{24}N_4O_4S$	Nitro-Setoperone	1820
$C_{21}H_{25}NO \cdot CH_4O_3S$	Benztropine Mesylate	4231
$C_{21}H_{26}BN_3O_5$	Mazenil pinacol boronate	1691
$C_{21}H_{26}FNO_3$	MDL105725	1840
$C_{21}H_{34}ClN_3S_2 \cdot C_6H_3F_9O_6$	TRODAT	7400
$C_{21}H_{35}N_3O_4Sn$	TMSnBG	7012
$C_{22}H_{20}FN_3O_6S$	Tosyloxyethylflumazenil	1721
$C_{22}H_{21}FN_2O_3$	FEPPA standard	1655
$C_{22}H_{22}FN_3O_2S$	Altanserin	1810
$C_{22}H_{22}N_4O_4S$	Nitro-Altanserin	1800
$C_{22}H_{23}F_3O_8S$	MBBTG	1119
$C_{22}H_{25}NOS \cdot C_4H_6O_6$	(+)-McN 5652 Thiobutyrate	4360
$C_{22}H_{26}F_2N_2O_2S$	(S)-Methyl-FPSPPA	2470
$C_{22}H_{26}F_2N_2O_2S$	(R)-Methyl-FPSPPA	2480
$C_{22}H_{26}INO_3$	Me-QNB	2840
$C_{22}H_{27}N_5O_3$	Desmethyl-MPT	3260
$C_{22}H_{27}NO_5$	(2S,3S)-N-Boc-norethylreboxetine	4400
$C_{22}H_{28}FNO_3$	MDL100907	1850
$C_{22}H_{28}FNO_3$	MDL100151	1860
$C_{22}H_{28}FNO_3 \cdot C_4H_6O_6$	MDL100907 tartrate salt	1870
$C_{22}H_{29}N_5O_4 \cdot HCl$	GB 99	2570
$C_{22}H_{30}INO_9$	DiBoc-Iodo-L-DOPA	1320
$C_{22}H_{30}N_2O_4$	Desmethyl-MK-8278	3720
$C_{22}H_{30}NO_2 \cdot CF_3O_3S$	PMBAB	4390
$C_{22}H_{31}F_3O_6S$	FDHT precursor	1916
$C_{23}H_{26}FN_3O_2$	FNMB	2760
$C_{23}H_{26}O_8S$	6-FDG precursor	1109
$C_{23}H_{27}N_2O_3Na$	Desmethylcarfentanil, sodium salt	2400
$C_{23}H_{27}NO_6$	(2S,3S)-N-Boc-carboxylreboxetine	4402
$C_{23}H_{28}FNO_2$	(-)-FEBV	4610
$C_{23}H_{28}N_2O_3$	Desmethylcarfentanil acid	2390
$C_{23}H_{29}N_5O_3$	MPT	3270
$C_{23}H_{31}N_5O_4 \cdot HCl$	GB 67	2580
$C_{23}H_{32}F_3N_5O_{10}$	deprotected DCFPyL precursor	9941
$C_{23}H_{34}F_3NO_7Sn$	N-Trifluoroacetyl-3,4-di-tert-butoxycarbonyloxy-6-trimethylstannyl-phenethylamine	1371
$C_{24}H_{32}N_4O_2 \cdot x\ H_2O \cdot y\ HCl$	Desmethyl-WAY100635	3220
$C_{24}H_{39}NO_7Sn$	N,O-Di-Boc-2-TMSn-L-tyrosine ethyl ester	3000
$C_{24}H_{39}NO_7Sn$	N,O-Di-Boc-2-TMSn-m-tyrosine ethyl ester	3110
$C_{24}H_{44}CuN_4O_4 \cdot BF_4$	Copper tetraMIBI tetrafluoroborate $[Cu(MIBI)_4]BF_4$	7210
$C_{24}H_{44}CuN_4O_4 \cdot BF_4$	Copper tetraMIBI tetrafluoroborate (GMP)	7211
$C_{24}H_{44}N_4O_8$	DOTAEt	7301
$C_{25}H_{23}N_3O_3S$	DMTEAN	5000
$C_{25}H_{27}N_4O_2F$	MPPF	3250
$C_{25}H_{27}N_5O_4$	Nitro-MPPF	3240
$C_{25}H_{29}F_2N_3O_2$	Fluoroethylspiperone	1591
$C_{25}H_{29}FO_5$	FFNP standard	1928

$C_{25}H_{30}INO_5S \cdot C_7H_8O_3S$	CITTP Tosylate	4122
$C_{25}H_{31}FN_2O_3$	Fluoroethyl-Carfentanil	2420
$C_{25}H_{31}FN_2O_3 \cdot HCl$	Fluoroethyl-Carfentanil hydrochloride	2421
$C_{25}H_{31}N_3O_{12}S$	Di-THP-nosyl-AUR	2921
$C_{25}H_{33}FN_2O_4$	ISOF	3591
$C_{25}H_{34}N_4O_2$	WAY 100635	3210
$C_{25}H_{36}INO_{10}$	TriBoc-Iodo-L-DOPA	1350
$C_{25}H_{39}NO_9Sn$	6-Trimethylstannyl-L-DOPA	1300
$C_{25}H_{39}NO_9Sn$	6-Trimethylstannyl-D,L-DOPA	1302
$C_{25}H_{39}NO_9Sn$	6-Trimethylstannyl-D-DOPA	1303
$C_{26}H_{24}N_2O_9S_2$	Dimethyl-8-phenylsulfonyl-5-phenylsulfonyloxy-hexahydropyrrolo[2,3]indol-1,2-dicarboxylate	6520
$C_{26}H_{32}O_8S$	FFNP precursor	1926
$C_{26}H_{34}N_2O_5S$	Tosyl-Desmethoxyfallypride	1570
$C_{26}H_{35}NO_4$	Diprenorphine	2020
$C_{26}H_{36}ClNO_4$	Diprenorphine hydrochloride	2010
$C_{26}H_{36}N_2O_4$	Norverapamil	5600
$C_{26}H_{36}N_2O_4$	(-)-Norverapamil	5620
$C_{26}H_{36}N_2O_7S$	ISOM	3590
$C_{26}H_{38}N_4O_8Sn$	SGMIB Precursor	7015
$C_{27}H_{21}F_3O_{10}S$	2-O-(Trifluoromethylsulfonyl)-1,3,5-tri-O-benzoyl-α-L-ribofuranose	2869
$C_{27}H_{21}F_3O_{10}S$	2-O-(Trifluoromethylsulfonyl)-1,3,5-tri-O-benzoyl-α-D-ribofuranose	2870
$C_{27}H_{28}N_2O_3$	N-Methylnaltrindole	2810
$C_{27}H_{29}FN_4O$	O-Desmethyl Astemizole	5166
$C_{27}H_{32}INO_5S$	TEO-PE2I	4172
$C_{27}H_{36}FNO_4$	6-O-Fluoroethyl-6-O-desmethyl-diprenorphine	2040
$C_{27}H_{36}N_2O_6S$	Tosyl-Fallypride	1550
$C_{27}H_{38}N_2O_4 \cdot HCl \cdot H_2O$	(+)-Verapamil hydrochloride	5630
$C_{27}H_{41}N_9O_7$	Cyclo-RGDfK	9860
$C_{27}H_{45}NO_8Sn$	OMFD precursor ABX004	1363
$C_{28}H_{31}FN_4O$	Astemizole	5165
$C_{28}H_{35}FN_2O_5$	Nucleophilic F-L-DOPA precursor	1335
$C_{28}H_{45}NO_{10}Sn$	TriBoc-L-DOPA methyl ester	1340
$C_{28}H_{47}NO_2Sn$	TBS-CT	4041
$C_{28}H_{50}N_2O_3Sn$	Tin-epidepride precursor	1521
$C_{29}H_{28}N_2O_6S$	FEPPA precursor	1654
$C_{29}H_{40}N_4O_7S$	CPTPX	3750
$C_{29}H_{41}NO_4 \cdot HCl$	Buprenorphine hydrochloride	2056
$C_{29}H_{47}NO_{10}Sn$	TriBoc-D,L-DOPA ethyl ester	1341
$C_{29}H_{47}NO_{10}Sn$	TriBoc-L-DOPA ethyl ester	1342
$C_{30}H_{35}NO_4$	Phenethyl-orvinol	2052
$C_{30}H_{35}NO_5S$	(-)-TEBV	4600
$C_{30}H_{43}N_3Sn$	TBS-CNS 1261	7030
$C_{30}H_{44}O_5S_2$	Benzyl-14-(R,S)-tosyloxy-6-thiaheptadecanoate	2850
$C_{30}H_{50}FNO_2Sn$	TBSCT-FP	4132
$C_{31}H_{27}IN_2O_5S$	5-Fluorouracil precursor	2958

$C_{31}H_{30}N_2O_6$	Anhydrothymidine-FLT precursor	1210
$C_{31}H_{32}N_2O_7$	DMTr-lyxothymidine	1180
$C_{31}H_{36}FNO_4$	6-O-(2-Fluoroethyl)-6-O-desmethyl-phenethyl-orvinol	2053
$C_{31}H_{51}NO_2Sn$	PE2I tin precursor	4165
$C_{33}H_{32}N_2O_3$	3-O-Benzyl-naltrindole	2800
$C_{33}H_{39}NO_8S$	TNB-Androstanone	1919
$C_{33}H_{46}N_{12}O_8$	HYNIC-cyclo(RGDfK) trifluoroacetate	9864
$C_{33}H_{54}BNO_{12}$	F-L-DOPA pinacol boronate precursor	1312
$C_{34}H_{42}N_2O_6$	Fmoc-Lys(ivDde)-OH	9500
$C_{34}H_{48}N_2O_{10}$	HBED-CC-di(tBu)ester	7331
$C_{34}H_{52}N_{10}O_{12}$	Galacto-RGD	9790
$C_{34}H_{54}BN_3O_{10}$	MFBG pinacol boronate precursor	7033
$C_{35}H_{36}N_2O_7$	n.c.a. Nucleophilic F-L-DOPA precursor	1336
$C_{35}H_{49}F_4FeN_6O_{11}$	TFP-N-sucDf-Fe	7270
$C_{36}H_{39}FN_2O_8$	3-N-Boc-5′-O-dimethoxytrityl-3′-fluorothymidine	1261
$C_{36}H_{44}FN_3O_6S$	N-Mesitylenesulfonyloxy-ethyl-spiperone	1590
$C_{37}H_{35}N_3O_{11}S$	DMTr-Nosyl-lyxothymidine	1190
$C_{37}H_{55}FN_{10}O_{13}$	Fluoropropionyl-Galacto-RGD	9800
$C_{38}H_{56}N_2O_{10}$	HBED-CC-tris(tBu)ester	7330
$C_{39}H_{60}N_{12}O_{12} \cdot x\ CH_3CO_2H$	NOTA-RGDfK acetate	9802
$C_{40}H_{43}N_3O_6 \cdot 2\ HCl$	Norbinaltorphimine dihydrochloride	4500
$C_{41}H_{43}NO_6S$	TET	3050
$C_{41}H_{43}NO_6S$	TET (GMP)	3051
$C_{41}H_{43}NO_6S$	TET (GMP)	3052
$C_{42}H_{43}N_3O_{13}S$	3-N-Boc-5′-O-dimethoxytrityl-3′-O-nosyl-thymidine	1240
$C_{42}H_{43}N_3O_{13}S$	3-N-Boc-5′-O-dimethoxytrityl-3′-O-nosyl-thymidine (GMP)	1241
$C_{42}H_{56}N_4O_{12}$	N-Demethylrifampicin	5700
$C_{42}H_{64}N_{12}O_{15}$	NODAGA-RGD trifluoroacetate	9805
$C_{42}H_{64}N_{12}O_{15}$	NODAGA-RGD (GMP)	9806
$C_{42}H_{61Ga}N_{12}O_{15}$	Ga-NODAGA-RGD	9807
$C_{43}H_{67}N_{13}O_{14}$	DOTA-cyclo(RGDfK) acetate	9863
$C_{44}H_{47}NO_4$	3-O-Trityl-6-O-desmethyl-diprenorphine	2000
$C_{44}H_{62}N_6O_{17} \cdot x\ CF_3CO_2H$	PSMA-11 (GMP)	9919
$C_{44}H_{62}N_6O_{17} \cdot x\ CF_3CO_2H$	PSMA-11	9920
$C_{44}H_{62}N_6O_{17} \cdot x\ CF_3CO_2H$	PSMA-11 (GMP)	9921
$C_{44}H_{59Ga}N_6O_{17}$	GaPSMA-11	9922
$C_{45}H_{49}NO_4$	3-O-Trityl-diprenorphine	2030
$C_{46}H_{45}N_3O_{13}S$	Dimethoxybenzyl-FLT precursor	1200
$C_{46}H_{50}FNO_4$	6-O-Fluoroethyl-6-O-desmethyl-3-O-trityl-diprenorphine	2050
$C_{47}H_{53}NO_4$	3-O-Trityl-6-O-desmethyl-buprenorphine	2055
$C_{48}H_{47}NO_4$	3-O-Trityl-6-O-desmethyl-phenethyl-orvinol	2051
$C_{49}H_{55}FN_8O_{16}$	PSMA-1007 reference standard	99433
$C_{49}H_{64}N_{10}O_{11}S_2$	[Lys^5(Boc)]octreotate acetate	9901
$C_{49}H_{64}N_{10}O_{12}S_2$	[Tyr^3]Octreotate acetate	9774
$C_{49}H_{66}N_{10}O_{10}S_2$	Octreotide acetate	9750
$C_{49}H_{66}N_{10}O_{11}S_2$	[Tyr^3]Octreotide acetate	9810

$C_{49}H_{71}N_9O_{16}$	PSMA-617	9933
$C_{49}H_{71}N_9O_{16}$	PSMA-617 (GMP)	9934
$C_{49}H_{68Ga}N_9O_{16}$ x CF_3CO_2H	GaPSMA-617	9935
$C_{49}H_{68Lu}N_9O_{16}$ · x CF_3CO_2H	LuPSMA-617	9936
$C_{53}H_{68}N_{10}O_{10}S_2$	[Nal^3]Octreotide acetate	9752
$C_{54}H_{64}F_3N_9O_{18}$	PSMA-1007 precursor	9943
$C_{54}H_{69}N_{11}O_{10}S_2$	Lanreotide trifluoroacetate	9820
$C_{54}H_{74}N_{10}O_{13}S_2$	[Tyr^3,Lys^5(Boc)]octreotide acetate	9900
$C_{55}H_{71}N_{13}O_{12}S_2$	HYNIC-TOC trifluoroacetate	9721
$C_{57}H_{53}N_5O_7S$	Tosyl-FHBG	2960
$C_{58}H_{76}N_{10}O_{12}S_2$	[Nal^3,Lys^5(Boc)]octreotide acetate	9903
$C_{59}H_{73}N_{13}O_{11}S_2$	HYNIC-NOC trifluoroacetate	9730
$C_{59}H_{77}N_{11}O_{12}S_2$	[Lys^5(Boc)]lanreotide acetate	9902
$C_{59}H_{87}N_{19}O_{16}$	Cyclo-RGDfK dimer trifluoroacetate	9861
$C_{60}H_{74}N_{14}O_{11}S_2$	HYNIC-Lanreotide trifluoroacetate	9836
$C_{61}H_{85}N_{13}O_{15}S_2$	NOTA-Octreotide trifluoroacetate	9762
$C_{62}H_{92}N_{10}O_{24}$ · x CF_3CO_2H	PSMA-10	9923
$C_{63}H_{87}N_{13}O_{19}S_2$	Pentreotide trifluoroacetate	9740
$C_{63}H_{87}N_{13}O_{20}S_2$	DTPA-TOC trifluoroacetate	9744
$C_{64}H_{92}N_{18}O_{16}S$	NOTA-AMBA trifluoroacetate	9815
$C_{65}H_{87}N_{13}O_{15}S_2$	NOTA-NOC acetate	9765
$C_{65}H_{89}N_{14}O_{18}S_2Y$	Y-DOTA-TOC	9704
$C_{65}H_{90}N_{14}O_{19}S_2$	DOTA-TATE acetate (GMP)	9772
$C_{65}H_{92}N_{14}O_{18}S_2$	DOTATOC (GMP)	9702
$C_{65}H_{92}N_{22}O_{17}S_2$	HYNIC-cyclo(RGDfK) dimer trifluoroacetate	9867
$C_{65}H_{87Ga}N_{14}O_{19}S_2$	Ga-DOTA-TATE	9773
$C_{65}H_{89Ga}N_{14}O_{18}S_2$	Ga-DOTA-TOC acetate	9703
$C_{65}H_{89Lu}N_{14}O_{18}S_2$	Lu-DOTA-TOC	9705
$C_{67}H_{96}N_{14}O_{17}S_2$	TETA-Octreotide acetate	9760
$C_{67}H_{96}N_{18}O_{18}S$	NODAGA-AMBA trifluoroacetate	9814
$C_{68}H_{91}N_{13}O_{17}S_2$	NODAGA-NOC acetate	9718
$C_{68}H_{99}N_{19}O_{18}S$	AMBA acetate	9714
$C_{68}H_{100}N_{20}O_{18}$	DOTA-NAPamide trifluoroacetate	9855
$C_{68}H_{121}N_{31}O_{18}S$	Ubiquicidin (29-41) acetate	9600
$C_{68}H_{121}N_{31}O_{18}S$	Scrambled Ubiquicidin (29-41)	9602
$C_{69}H_{94}N_{14}O_{17}S_2$	DOTA-NOC acetate	9712
$C_{69}H_{94}N_{14}O_{17}S_2$	DOTA-NOC acetate (GMP)	9716
$C_{69}H_{91Ga}N_{14}O_{17}S_2$	Ga-DOTA-NOC	9717
$C_{70}H_{74}N_{10}O_{18}S_2$	5(6)-FAM-TATE	9908
$C_{70}H_{95}N_{15}O_{17}S_2$	DOTA-Lanreotide acetate	9831
$C_{74}H_{104}N_{12}O_{20}S_2$	Gluc-[Lys^0,Lys(ivDde)^5]-TOCA	9771
$C_{74}H_{107Ga}N_{22}O_{25}$	Ga-NODAGA-RGD dimer	9803
$C_{74}H_{110}N_{22}O_{25}$	NODAGA-RGD dimer acetate	9804
$C_{74}H_{110}N_{24}O_{18}S$ · x CF_3CO_2H	[Pro^1,Tyr^4]bombesin (1-14)	9816
$C_{75}H_{113}N_{23}O_{23}$	DOTA-RGDfK dimer acetate	9862
$C_{77}H_{107}FN_{12}O_{21}S_2$	Gluc-Lys(FP)-TOCA	9778

$C_{79}H_{124}N_{22}O_{20} \cdot x\ CH_3CO_2H<$	DOTA-Substance P	9960
$C_{80}H_{140}N_{34}O_{23}S \cdot x\ CH_3CO_2H$	NOTA-Ubiquicidin (29-41) acetate	9603
$C_{81}H_{115}N_{23}O_{26}S$ (net peptide)	DTPA-Bn-cyclo(RDGfK) dimer trifluoroacetate	9866
$C_{84}H_{147}N_{35}O_{25}S$	DOTA-Ubiquicidin (29-41) acetate	9601
$C_{90}H_{136}N_{28}O_{25}S<$	DOTA-[Pro^1,Tyr^4]bombesin (1-14)	9715
$C_{94}H_{112}N_{12}O_{16}S_3$	ICG-TATE	9782
$C_{114}H_{155}N_{25}O_{38}$	DOTA-Sargastrin	9857
CH_2Br_2	Dibromomethane	6176
$CH_4Na_2O_7P_2$	HMDP	7161
$CH_6O_6P_2$	MDP	7160
$LiAlH_4$	Lithium Aluminium Hydride in THF bulk	801
$LiAlH_4$	Lithium aluminium hydride (0.1 M in THF)	802
$LiAlH_4$	Lithium aluminium hydride (0.25 M in THF)	803
$LiAlH_4$	Lithium aluminium hydride (0.05 M in THF)	804
$LiAlH_4$	Lithium aluminium hydride (0.1 M in THF)	832
$LiAlH_4$	Lithium aluminium hydride (0.1 M in THF)	832

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