

TECHNICAL DATA SHEET

^{125}I

Caution: For Laboratory Use. A product for research purposes only.

^{125}I -PEPTIDE YY ^{125}I -PYY

Product Number: NEX240

Tyr-Pro-Ala-Lys-Pro-Glu-Ala-Pro-Gly-Glu¹⁰-Asp-Ala-Ser-Pro-Glu-Glu-Leu-Ser-Arg-Tyr²⁰-Tyr-Ala-Ser-Leu-Arg-His-Tyr-Leu-Asn-Leu³⁰-Val-Thr-Arg-Gln-Arg-Tyr-NH₂

LOT SPECIFIC INFORMATION

CALCULATED AS OF: 15-Sep-2014

LOT NUMBER: EC02440

SPECIFIC ACTIVITY: 81.4 TBq/mmol
2200 Ci/mmol
18.6 MBq/μg
504 μCi/μg

Package Size Information

Package Size as of 24-Oct-2014
370 kBq 10 μCi
1.85 mBq 50 μCi

RADIOCHEMICAL PURITY: ≥ 95%

MOLECULAR WEIGHT: 4365

PACKAGING: ^{125}I -Peptide YY is lyophilized from 0.05M sodium phosphate (pH 5.2), containing 0.18M sodium chloride, 1M glycine, 0.25% bovine serum albumin. It is shipped ambient in Sigma CotedTM treated vials.

STABILITY AND STORAGE: ^{125}I -Peptide YY should be stored be at 4°C or lower. Lyophilized, the product is stable for at least six weeks. It should be reconstituted with distilled water to a concentration of approximately 50 μCi/ml and stored at -20°C. Under these conditions ^{125}I -PYY is stable and usable for at least 4 weeks in a receptor binding assay.

SPECIFIC ACTIVITY: The initial specific activity of ^{125}I -Peptide YY is 2200 Ci/mmol (81 TBq/mmol), 504 μCi/μg (18.6 MBq/μg). Upon decay, ^{125}I -Peptide YY undergoes decay catastrophe and the specific activity remains constant with time. However, it is not known what molecular fragments are generated from the decay event or what functional activity these fragments may have in different assays. For information on ^{125}I decay and decay catastrophe of ^{125}I labeled compounds see references ¹⁻⁵.

RADIOCHEMICAL PURITY: Initially greater than 95% radiochemically pure as determined by reversed phase high performance liquid chromatography (RP-HPLC).

PREPARATIVE PROCEDURE: Synthetic Peptide YY is radioiodinated with no-carrier-added ^{125}I using a modification of the chloramine-T method.⁶ Peptide YY contains 5 tyrosine and 1 histidine residues thus many [^{125}I] positional isomers are formed. There are four major isomers and a number of minor impurities separated by preparative RP-HPLC. The peak selected shows the greatest receptor binding characteristics⁸⁻⁹. Pronase hydrolysis indicated that [^{125}I]-Peptide YY is labeled on a tyrosine residue and not on the lone histidine. The position of the labeled tyrosine has not been determined.

AVAILABILITY: [^{125}I]-Peptide YY is routinely available from stock and is prepared fresh and packaged for shipment on the third Monday of each month. Please inquire for larger package sizes.

HAZARD WARNING: This product contains a chemical(s) known to the state of California to cause cancer. This product also contains a component which is harmful by contact, ingestion or inhalation. It is irritating to the eyes, skin and respiratory tract. It is toxic.

RADIATION UNSHIELDED: 280mR/hr/mCi at vial surface.

REFERENCES:

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3. Loring, R.H., et al, *J. Biol. Chem.* **257** 1418 (1982).
4. Berridge, M.S., Jiang, V.W. and Welch, M.J., *Radiation Research* **82**, 467 (1980).
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6. Hunter, W.M. and Greenwood, F.C., *Nature* **194** 495 (1962).
7. Miller, R.J., *J. Med. Chem.* **27** 1239 (1984).
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IODINE-125 DECAY CHART HALF LIFE=60 days

Radiations: Gamma 35.5 keV (7%) , X-ray K alpha 27 KeV (112%), K beta 31 keV (24%)

DAYS	0	2	4	6	8	10	12	14	16	18
0	1.000	.977	.955	.933	.912	.891	.871	.851	.831	.812
20	.794	.776	.758	.741	.724	.707	.691	.675	.660	.645
40	.630	.616	.602	.588	.574	.561	.548	.536	.524	.512
60	.500	.489	.477	.467	.456	.445	.435	.425	.416	.406
80	.397	.388	.379	.370	.362	.354	.345	.338	.330	.322
100	.315	.308	.301	.294	.287	.281	.274	.268	.262	.256
120	.250	.244	.239	.233	.228	.223	.218	.213	.208	.203

o obtain the correct radioactive concentration or amount for a date before the calibration date: divide by the decay factor corresponding to the number of days before the calibration date. To obtain the correct radioactive concentration or amount for a date after the calibration date: multiply by the decay factor corresponding to the number of days after the calibration date.

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