[^{125}I]Tyr3-Neurotensin

pGlu-Leu-[^{125}I]Tyr-Glu-Asn-Lys-Pro-Arg-Arg-Pro-Tyr-Ile-Leu

Product Number: NEX198

LOT SPECIFIC INFORMATION:

CALCULATED AS OF: 18-Dec-2023

LOT NUMBER: DA11940

SPECIFIC ACTIVITY:
81.4 TBq/mmol
2200 Ci/mmol
45 MBq/µg
1224 µCi/µg

CONCENTRATION:
3.0 MBq/ml
80.0 µCi/ml

RADIOCHEMICAL PURITY: ≥ 95%

MOLECULAR WEIGHT: ~1797

Package Size Information

Package Size as of 19-Jan-2024	Volume
370 kBq 10 µCi	0.20 ml
1.85 MBq 50 µCi	1.00 ml

PACKAGING: [^{125}I]Tyr^{3}-Neurotensin is in a solution containing 0.1M potassium phosphate, pH 4.7: methanol (58:42). It is shipped ambient.

STABILITY AND STORAGE: [^{125}I]Tyr^{3}-Neurotensin should be stored at -20°C or lower. Under these conditions the product is stable and usable in radioimmunoassays for at least six weeks after fresh lot date.

SPECIFIC ACTIVITY: The initial specific activity of [^{125}I]Tyr^{3}-Neurotensin is 2200 Ci/mmol, (81 TBq/mmol), 1224 µCi/µg (45 MBq/µg). Upon decay, [^{125}I]Tyr^{3}-Neurotensin undergoes decay catastrophe and the specific activity remains constant with time. However, it is not known what molecular or peptide fragments are generated from the decay event or what functional activity these fragments may have in different assays. References on ^{125}I decay and decay catastrophe of ^{125}I labeled compounds are available.[1-5]

RADIOCHEMICAL PURITY: Initially greater than 95% radiochemically pure as determined by HPLC.

PREPARATIVE PROCEDURE: Neurotensin is radioiodinated with no carrier added ^{125}I using a modification of the Hunter and Greenwood method.[6] Reversed phase HPLC is used to separate the Tyr^{3}-labeled neurotensin from the Try^{11}-labeled isomer and the unlabeled neurotensin. The position of labeling on these isomers has been determined by peptide mapping techniques. Pronase digestion followed by thin layer chromatography has been used to show that the iodine is present as monoiodotyrosine only.

AVAILABILITY: [^{125}I]Tyr^{3}-Neurotensin 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.

APPLICATIONS: [^{125}I]Tyr^{3}-Neurotensin has been shown to be active in radioimmunoassays as well as in receptor binding studies.[7,8]

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 and flammable. Target organs are the eyes, central nervous system, kidneys and the liver.

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

1. Doyle, V.M., Buhler, F.R., Burgisser, E., *Eur. J. Pharm.* 99 353 (1984).
2. Schmidt, J., *J. Biol. Chem*. 259 1660 (1984).
3. Loring, R.H., Jones, S.W., Matthews-Bellinger, J., Salpeter, M.M., *J. Biol. Chem*. 257 1418 (1982).
4. Berridge, M.S., Jiang, V.W., Welch, M.J., *Rad. Res*. 82 467 (1980).
5. Charlton, D.E., *Rad. Res*. 107 163 (1986).
6. Hunter, W.M. and Greenwood, F.C. *Nature*, 194, 495 (1962).
7. Vincent, J.P., et. al. Ann *N.Y. Acad. Sci.*, 400, 436 (1982).
8. Mazella, J. et.al., *J. Biol. Chem*. 258, 3476 (1983).

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

To 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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