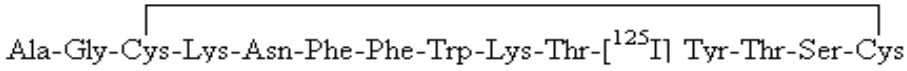
[^{125}I] TYR^{11}-SOMATOSTATIN 14

Product Number: NEX389



LOT SPECIFIC INFORMATION

CALCULATED AS OF: 18-Mar-2024

LOT NUMBER: JX41940

SPECIFIC ACTIVITY:
81.4 TBq/mmol
2200 Ci/mmol
45.8 MBq/µg
1237 µCi/µg

Package Size Information

Package Size as of 19-Apr-2024
370 kBq 10 µCi
1.85 MBq 50 µCi

RADIOCHEMICAL PURITY: ≥ 95%

MOLECULAR WEIGHT: ~1778

PACKAGING: [^{125}I]Tyr^{11}-Somatostatin 14 is lyophilized from a solution containing 0.04M sodium phosphate, 1M glycine, 0.2M sodium chloride, 0.25% BSA, 500 KIU/ml Trasylol® at pH 7.2. It is shipped ambient.

STABILITY AND STORAGE: The lyophilized [^{125}I]Tyr^{11}-Somatostatin 14 should be stored at 4°C or lower. Following reconstitution with distilled water to a concentration of approximately 100 µCi/ml on calibration date, aliquot and store at -20°C or lower. Under these conditions the product is stable and usable for at least six weeks after fresh lot date.

SPECIFIC ACTIVITY: The initial specific activity of [^{125}I]Tyr^{11}-Somatostatin 14 is 2200 Ci/mmol (81 TBq/mmol), 1237 µCi/µg (45.8 MBq/µg). Upon decay, [^{125}I]Tyr^{11}-Somatostatin 14 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: Somatostatin is radioiodinated with no carrier added ^{125}I using a modification of the Hunter and Greenwood method[6] and purified by reversed phase HPLC.

AVAILABILITY: [^{125}I]Tyr^{11}-Somatostatin 14 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: Somatostatin is a cyclic neuropeptide found in the brain, pancreas and hypothalamus and inhibits the release of growth hormone. [^{125}I] Tyr^{11} somatostatin binds to the receptors on RINm5F insolinoma cells with high affinity and inhibits the secretion of insulin from pancreatic β cells.[7] [^{125}I] Tyr^{11} somatostatin is a better radioanalog than [^{125}I] Tyr^{1} somatostatin for binding studies with intact cells because of its higher affinity for the somatostatin receptor.[8] This should facilitate the detection of G protein-coupled trans membrane receptors SST1-SST5 in other cell types.[8] [^{125}I] Tyr^{11} somatostatin is a useful radioligand for receptor characterization, binding studies and high through put screening experiments for drug discovery.

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 system. It is toxic and flammable. Target organs are the eyes, central nervous system, kidneys

and liver.

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

REFERENCES:

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. Sullivan, S.J. et al., *Journal of Biological Chemistry*, 261 3571 (1986).
8. Presky, D.H. et al. , *Molecular Pharmacology*, 34 651 (1988).

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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