

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

**[<sup>125</sup>I] –PHENYLACETYL-D-Tyr(Me)-Phe-Gln-Asn-Arg-Pro-Arg-Tyr-NH<sub>2</sub>**

**Product Number: NEX310**

**Linear Vasopressin V<sub>1A</sub> Receptor Antagonist**

**LOT SPECIFIC INFORMATION**

**CALCULATED AS OF:** 11-Oct-2021

**LOT NUMBER:** GSA1210

**SPECIFIC ACTIVITY:**  
81.4 TBq/mmol  
2200 Ci/mmol  
64 MBq/μg  
1727 μCi/μg

**Package Size Information**

Package Size as of 12-Nov-2021
370 kBq 10 μCi
1.85 MBq 50 μCi

**RADIOCHEMICAL PURITY:** ≥ 95%

**MOLECULAR WEIGHT:** 1274

**PACKAGING:** [<sup>125</sup>I]-Phenylacetyl-D-Tyr(Me)-Phe-Gln-Asn-Arg-Pro-Arg-Tyr-NH<sub>2</sub> is lyophilized from a solution containing 0.05M sodium phosphate, 1M glycine, 0.2M NaCl, 0.25% BSA, 500 KIU/ml Trasylol® at pH 4.2. It is shipped ambient.

**STABILITY AND STORAGE:** The lyophilized [<sup>125</sup>I]-Phenylacetyl-D-Tyr(Me)-Phe-Gln-Asn-Arg-Pro-Arg-Tyr-NH<sub>2</sub> should be stored at 4°C or lower. Following reconstitution with distilled water to a concentration of approximately 50 uCi/ml on calibration date, aliquot and store at 4°C or lower. Under these conditions the product is stable and usable for at least four weeks after fresh lot date.

**SPECIFIC ACTIVITY:** The initial specific activity of [<sup>125</sup>I]-Phenylacetyl-D-Tyr(Me)-Phe-Gln-Asn-Arg-Pro-Arg-Tyr-NH<sub>2</sub> is 2200 Ci/mmol (81 TBq/mmol), 1727 μCi/μg (64 MBq/μg). Preparative HPLC is used to separate Phenylacetyl-D-Tyr(Me)-Phe-Gln-Asn-Arg-Pro-Arg-Tyr-NH<sub>2</sub> from [<sup>125</sup>I]-Phenylacetyl-D-Tyr(Me)-Phe-Gln-Asn-Arg-Pro-Arg-Tyr-NH<sub>2</sub>. Upon decay, [<sup>125</sup>I]-Phenylacetyl-D-Tyr(Me)-Phe-Gln-Asn-Arg-Pro-Arg-Tyr-NH<sub>2</sub> 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 <sup>125</sup>I decay and decay catastrophe of <sup>125</sup>I labeled compounds are available.<sup>1-5</sup>

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

**PREPARATIVE PROCEDURE:** [<sup>125</sup>I]-Phenylacetyl-D-Tyr(Me)-Phe-Gln-Asn-Arg-Pro-Arg-Tyr-NH<sub>2</sub> is radioiodinated using no carrier added <sup>125</sup>I, by a modification of the Hunter and Greenwood method<sup>6</sup> and is purified by reverse phase HPLC.

**AVAILABILITY:** [<sup>125</sup>I]-Phenylacetyl-D-Tyr(Me)-Phe-Gln-Asn-Arg-Pro-Arg-Tyr-NH<sub>2</sub> is routinely available from stock and is prepared fresh and packaged for shipment on the second Monday of each month. Please inquire for larger package sizes.

**APPLICATIONS:** [<sup>125</sup>I]-Phenylacetyl-D-Tyr(Me)-Phe-Gln-Asn-Arg-Pro-Arg-Tyr-NH<sub>2</sub> is useful in receptor studies and autoradiography for the localization and characterization of Vasopressin V<sub>1A</sub> receptors.<sup>7-10</sup>

**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 or ingestion. It is irritating to the eyes, the skin and the respiratory tract. It is toxic.

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

## REFERENCES:

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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. Manning, M. Klis, W.A., Kruszynski, M., Przybylski, J.P., Olma, A., Wo, N.C., Pelton, G.H., Sawyer, W.H., *Int. J. Peptide Protein Res.*, **32** 455 (1988).
8. Ferris, C.F., Delville, Y., Grzonka, Z., Luber-Narod, J., Insel, T.R., *Phys. Behav.* **54** 737 (1993).
9. Ferris, C.F., Personal Communication, (1995).
10. Schmidt, A., Audigier, S., Barberis, C., Jard, S., Manning, M., Kolodziejczyk, A.S., Sawyer, W.H., *FEBS Letters*

## 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
0	1	0.977	0.955	0.933	0.912	0.891	0.871	0.851	0.831
20	0.794	0.776	0.758	0.741	0.724	0.707	0.691	0.675	0.66
40	0.63	0.616	0.602	0.588	0.574	0.561	0.548	0.536	0.524
60	0.5	0.489	0.477	0.467	0.456	0.445	0.435	0.425	0.416
80	0.397	0.388	0.379	0.37	0.362	0.354	0.345	0.338	0.33
100	0.315	0.308	0.301	0.294	0.287	0.281	0.274	0.268	0.262
120	0.25	0.244	0.239	0.233	0.228	0.223	0.218	0.213	0.208

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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