

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

[¹²⁵I] –PHENYLACETYL-D-Tyr(Me)-Phe-Gln-Asn-Arg-Pro-Arg-Tyr-NH₂

Product Number: NEX310

Linear Vasopressin V_{1A} Receptor Antagonist

LOT SPECIFIC INFORMATION

CALCULATED AS OF: 12-Apr-2021

LOT NUMBER: GS51410

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

Package Size Information

| |
|--------------------------------------|
| Package Size as of 14-May-2021 |
| 370 kBq 10 μCi |
| 1.85 MBq 50 μCi |

RADIOCHEMICAL PURITY: ≥ 95%

MOLECULAR WEIGHT: 1274

PACKAGING: [¹²⁵I]-Phenylacetyl-D-Tyr(Me)-Phe-Gln-Asn-Arg-Pro-Arg-Tyr-NH₂ 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 [¹²⁵I]-Phenylacetyl-D-Tyr(Me)-Phe-Gln-Asn-Arg-Pro-Arg-Tyr-NH₂ 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 [¹²⁵I]-Phenylacetyl-D-Tyr(Me)-Phe-Gln-Asn-Arg-Pro-Arg-Tyr-NH₂ 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-NH₂ from [¹²⁵I]-Phenylacetyl-D-Tyr(Me)-Phe-Gln-Asn-Arg-Pro-Arg-Tyr-NH₂. Upon decay, [¹²⁵I]-Phenylacetyl-D-Tyr(Me)-Phe-Gln-Asn-Arg-Pro-Arg-Tyr-NH₂ 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 ¹²⁵I decay and decay catastrophe of ¹²⁵I labeled compounds are available.¹⁻⁵

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

PREPARATIVE PROCEDURE: [¹²⁵I]-Phenylacetyl-D-Tyr(Me)-Phe-Gln-Asn-Arg-Pro-Arg-Tyr-NH₂ is radioiodinated using no carrier added ¹²⁵I, by a modification of the Hunter and Greenwood method⁶ and is purified by reverse phase HPLC.

AVAILABILITY: [¹²⁵I]-Phenylacetyl-D-Tyr(Me)-Phe-Gln-Asn-Arg-Pro-Arg-Tyr-NH₂ 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: [¹²⁵I]-Phenylacetyl-D-Tyr(Me)-Phe-Gln-Asn-Arg-Pro-Arg-Tyr-NH₂ is useful in receptor studies and autoradiography for the localization and characterization of Vasopressin V_{1A} receptors.⁷⁻¹⁰

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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6. Hunter, W.M. and Greenwood, F.C., *Nature* **194** 495 (1962).
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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 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 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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