

[¹²⁵I]Tyr⁴-Angiotensin II (human) Asp-Arg-Val-[¹²⁵I]Tyr-Ile-His-Pro-Phe

Product Number: NEX105

LOT SPECIFIC INFORMATION:

CALCULATED AS OF: 12-Feb-2024
LOT NUMBER: AL31540
SPECIFIC ACTIVITY: 81.4 TBq/mmol
 2200 Ci/mmol
 70 MBq/μg
 1879 μCi/μg

Package Size Information

Package Size as of 15-Mar-2024
370 kBq 10 μCi
1.85 MBq 50 μCi

RADIOCHEMICAL PURITY: ≥ 95%

MOLECULAR WEIGHT: 1,171

PACKAGING: [¹²⁵I]Tyr⁴-Angiotensin II is lyophilized from a solution containing 0.04M sodium phosphate, 1M glycine, 0.2M NaCl, 0.25% BSA, 500 KIU/ml Trasylo[®] at pH 7.2. It is shipped ambient.

STABILITY AND STORAGE: The lyophilized [¹²⁵I]Tyr⁴-Angiotensin II should be stored at 4°C or lower. Following reconstitution with distilled water to a concentration of approximately 50 μCi/ml on calibration date, aliquot and store at -20°C or lower. Under these conditions the product is stable and usable in radioimmunoassays for at least eight weeks after fresh lot date.

SPECIFIC ACTIVITY: The initial specific activity of [¹²⁵I]Tyr⁴-Angiotensin II is 2200 Ci/mmol (81 TBq/mmol), 1879 μCi/μg (70 MBq/μg). Preparative HPLC is used to separate unlabeled angiotensin II from [¹²⁵I]Tyr⁴-Angiotensin II. Upon decay, [¹²⁵I]Tyr⁴-Angiotensin II 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: Angiotensin II is radioiodinated with no carrier added ¹²⁵I using a modification of the Hunter and Greenwood method⁶ and purified by reversed phase HPLC.

AVAILABILITY: [¹²⁵I]Tyr⁴-Angiotensin II 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.

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 and inhalation. It is irritating to the eyes, skin and respiratory tract and is toxic.

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).

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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