

[¹²⁵I]-α-DENDROTOXIN

Product Number: NEX434

LOT SPECIFIC INFORMATION

CALCULATED AS OF: 25-Dec-2023

LOT NUMBER: LQ12640

SPECIFIC ACTIVITY: 81.4 TBq/mmol
 2200 Ci/mmol
 11.6 MBq/μg
 314.3 μCi/μg

RADIOCHEMICAL PURITY: ≥ 95%

MOLECULAR WEIGHT: 7000

Package Size Information

Package Size as of 26-Jan-2024
185 kBq 5 μCi
370 kBq 10 μCi

PACKAGING: [¹²⁵I]-α-Dendrotoxin is lyophilized from a solution containing 0.15M Sodium Phosphate, pH 7.4, 5% Sucrose, 0.25% BSA and 500KIU/ml aprotonin. It is packaged in TPX vials.

STABILITY AND STORAGE: The lyophilized product 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 four weeks after fresh lot date.

SPECIAL INFORMATION: [¹²⁵I]-α-Dendrotoxin sticks to glass. We recommend using silanized glass.

SPECIFIC ACTIVITY: The initial specific activity is 2200 Ci/mmol (81 TBq/mmol), 314.3 μCi/μg (11.6 MBq/μg). Preparative HPLC is used to separate unlabeled α-Dendrotoxin from [¹²⁵I]-α-Dendrotoxin. Upon decay, the product 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: α-Dendrotoxin is radioiodinated with no carrier added ¹²⁵I using a modification of the Hunter and Greenwood method⁶ and purified by reversed phase HPLC. This method predominantly labels tyrosine residues.

AVAILABILITY: [¹²⁵I]-α-Dendrotoxin is routinely available from stock and is prepared fresh and packaged for shipment on the fourth 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 1160 (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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