

[¹²⁵I] α-Bungarotoxin

Product Number: NEX126H

LOT SPECIFIC INFORMATION:

CALCULATED AS OF: 8-Jul-2024

LOT NUMBER: LW81640

SPECIFIC ACTIVITY: 81.4 TBq/mmol
2200 Ci/mmol
10 MBq/μg
271 μCi/μg

Package Size Information

Package Size as of 16-Aug-2024
1.85 MBq 50 μCi
9.25 MBq 250 μCi

RADIOCHEMICAL PURITY: ≥ 95%

MOLECULAR WEIGHT: ~8,119

PACKAGING: [¹²⁵I] α-Bungarotoxin 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] α-Bungarotoxin should be stored at 4°C or lower. Following reconstitution with distilled water to a concentration of approximately 250 μCi/ml on calibration date, aliquot and store at -20°C or lower. Under these conditions the product is stable and usable in receptor assays for at least four weeks after fresh lot date.

SPECIFIC ACTIVITY: The initial specific activity is 2200 Ci/mmol (81 TBq/mmol), 271 μCi/μg (10 MBq/μg). Preparative HPLC is used to separate unlabeled α-Bungarotoxin from [¹²⁵I] α-Bungarotoxin. 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

PREPARATIVE PROCEDURE α-Bungarotoxin is radioiodinated with no carrier added ¹²⁵I using a lactoperoxidase procedure⁶ and is purified by reversed phase HPLC. This procedure has been shown to iodinate α-Bungarotoxin only on Tyr^{54,7}.

RADIOCHEMICAL PURITY: Initially less than 5% free iodide.

AVAILABILITY: ^{125}I -Bungarotoxin 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. Marchalonis, J.J., *Biochemical Journal* 113 299 (1969)
7. Wang, G.K. and Schmidt, J. *J. Biol. Chem.* 255 11156-11162 (1980).

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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