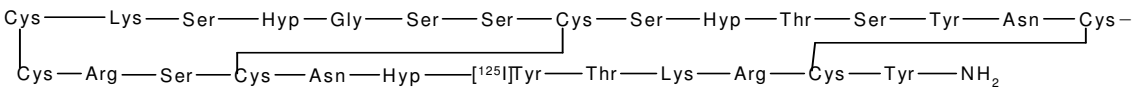
TECHNICAL DATA SHEET

^{125}I

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

[^{125}I]Tyr22-w-Conotoxin GVIA 1,2

Product Number: NEX239



LOT SPECIFIC INFORMATION:

CALCULATED AS OF: 13-Oct-2014

LOT NUMBER: EBA1440

SPECIFIC ACTIVITY:

81.4	TBq/mmol
2200	Ci/mmol
25.8	MBq/µg
696	µCi/µg

Package Size Information

Package Size as of 14-Nov-2014
370 kBq 10 µCi
1.85 MBq 50 µCi

RADIOCHEMICAL PURITY: ≥ 95%

MOLECULAR WEIGHT: 3161

PACKAGING: [^{125}I]Tyr^{22}-ω-Conotoxin GVIA is lyophilized from a solution containing 0.05M sodium phosphate, 0.18M NaCl, 1M glycine, 0.1% BSA, at pH 5.2. It is shipped ambient.

STABILITY AND STORAGE: The lyophilized [^{125}I]Tyr^{22}-ω-Conotoxin GVIA 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 stor at
-20°C or lower. Under these conditions the product is stable and usable in receptor binding assays for at least four weeks afte fresh lot date.

SPECIFIC ACTIVITY: The initial specific activity of [^{125}I]Tyr^{22}-ω-Conotoxin GVIA is 2200 Ci/mmol (81 TBq/mmol), 69 µCi/µg (26 MBq/µg). Preparative HPLC is used to separate unlabeled ω̃Conotoxin GVIA from [^{125}I]Tyr^{22}-ω-Conotoxin GVIA Upon decay, [^{125}I]Tyr^{22}-ω-Conotoxin GVIA undergoes decay catastrophe and the specific activity remains constant with tim However, it is not known what molecular or peptide fragments are generated from the decay event or what functional activi these fragments may have in different assays. References on ^{125}I decay and decay catastrophe of ^{125}I labeled compounds a available.[3-7]

PREPARATIVE PROCEDURE: Synthetic ω–Conotoxin GVIA is radioiodinated with no carrier added ^{125}I usir a modification of the Hunter and Greenwood method.[8] ω–Conotoxin GVIA contains 3 tyrosine residues, thus sever positional isomers are formed. Preparative reversed phase HPLC is used to separate these isomers and min impurities as described by Cruz and Olivera.[1] The product is the single isomer monoiodinated at Tyr^{22} as describe by Cruz et al.[9]

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

AVAILABILITY: [^{125}I]Tyr^{22}-ω-Conotoxin GVIA 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: [^{125}I]Tyr^{22}-ω-Conotoxin GVIA is a selective Ca^{++} channel ligand and has been used in autoradiography and quantitative receptor binding assays.[10,11]

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. Cruz, L.J. and Olivera, B.M., *J. Biol. Chem.* 261, 6230 (1986).
2. Olivera, B.M., McIntosh, J.M., Cruz, L.J., Luque, F.A., Gray, W.R., *Biochem.* 23, 5086 (1984).
3. Doyle, V.M., Buhler, F.R., Burgisser, E., *Eur. J. Pharm.* 99 353 (1984).
4. Schmidt, J., *J. Biol. Chem.* 259 1660 (1984).
5. Loring, R.H., Jones, S.W., Matthews-Bellinger, J., Salpeter, M.M., *J. Biol. Chem.* 257 1418 (1982).
6. Berridge, M.S., Jiang, V.W., Welch, M.J., *Rad. Res.* 82 467 (1980).
7. Charlton, D.E., *Rad. Res.* 107 163 (1986).
8. Hunter, W.M. and Greenwood, F.C., *Nature* 194 495 (1962).
9. Cruz, L.J., Johnson, D.S., and Olivera, B.M. *Biochemistry*, 26. 820 (1987).
10. Wagner, J., and Snyder, S., et al., The John Hopkins Univ., personal communication.
11. Olivera, B.M., Univ. of Utah, personal communication.

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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