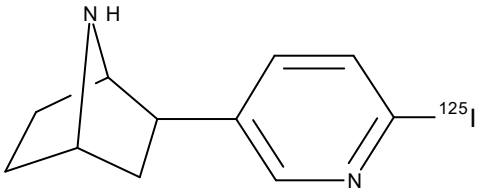
[^{125}I]-Epibatidine
[^{125}I]-IPH

Product Number: NEX358



LOT SPECIFIC INFORMATION

CALCULATED AS OF: 3-Jun-2024

LOT NUMBER: IS80940

SPECIFIC ACTIVITY: 81.4 TBq/mmol
2200 Ci/mmol
273 MBq/µg
7383 µCi/µg

CONCENTRATION: 4.7 MBq/ml
127.8 µCi/ml

RADIOCHEMICAL PURITY: ≥ 95%

MOLECULAR WEIGHT: 298

Package Size Information

Package Size as of 9-Aug-2024	Volume
370 kBq 10 µCi	0.20 ml
1.85 MBq 50 µCi	1.00 ml

PACKAGING: [^{125}I]-IPH is in ethanol (may also contain up to 10% acetonitrile from the purification process). It is shipped on dry ice.

STABILITY AND STORAGE: [^{125}I]-IPH should be stored at -20°C. Under these conditions, the product is stable and usable for at least eight weeks after fresh lot date.

SPECIFIC ACTIVITY: The initial specific activity of [^{125}I]-IPH is 2200 Ci/mmol, (81 TBq/mmol), 7383 µCi/µg (273 MBq/µg). Preparative HPLC is used to separate unlabeled IPH precursor from [^{125}I]-IPH product. Upon decay, [^{125}I]-IPH undergoes decay catastrophe and the specific activity remains constant with time. However, it is not known what molecular fragments are generated from the decay event or what functional activity these fragments may have in different assays. References on ^{125}I decay and decay catastrophe of ^{125}I labeled compounds are available.[1-5]

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

PREPARATIVE PROCEDURE: [^{125}I]-IPH is produced using stannyl epibatidine and peracetic acid with no carrier added ^{125}I and is purified by reversed phase HPLC.

AVAILABILITY: [^{125}I]-IPH is routinely available from stock and is prepared fresh and packaged for shipment on the first Monday of February, April, June, August, October and December. Please inquire for larger package sizes.

sizes.

APPLICATIONS: [^{125}I]-IPH is a very useful tool for the study of neuronal nicotinic receptors. It binds with high affinity to several different neuronal nicotinic receptor subtypes. The high specific activity (2200 Ci/mmol) of [^{125}I]-IPH allows autoradiographic experiments to be done in much shorter time (1 or 2 days vs. 2 months for [^{3}H] ligands).[6]

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. It is toxic and flammable. The target organs are the central nervous system, respiratory system, kidneys and liver.

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. Dávila-García, M.I., Musachio, J.L., Perry, D.C., Xiao, Y., Horti, A., London, E.D., Dannals, R.F., Kellar, K.J., *J. Pharmacol. Exp. Ther.* 282 445-51 (1997).

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	0.977	0.955	0.933	0.912	0.891	0.871	0.851	0.831	0.812
20	0.794	0.776	0.758	0.741	0.724	0.707	0.691	0.675	0.66	0.645
40	0.630	0.616	0.602	0.588	0.574	0.561	0.548	0.536	0.524	0.512
60	0.500	0.489	0.477	0.467	0.456	0.445	0.435	0.425	0.416	0.406
80	0.397	0.388	0.379	0.37	0.362	0.354	0.345	0.338	0.33	0.322
100	0.315	0.308	0.301	0.294	0.287	0.281	0.274	0.268	0.262	0.256
120	0.250	0.244	0.239	0.233	0.228	0.223	0.218	0.213	0.208	0.203

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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