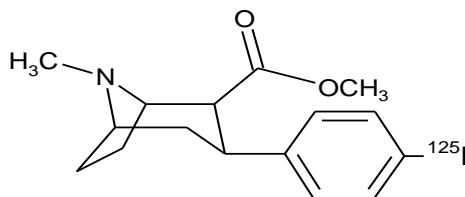


[¹²⁵I]-RTI-55

Product Number: NEX272

**LOT SPECIFIC INFORMATION**

CALCULATED AS OF: 24-Feb-2025

LOT NUMBER: FH50250

SPECIFIC ACTIVITY: 81.4 TBq/mmol
 2200 Ci/mmol
 211 MBq/μg
 5711 μCi/μg

CONCENTRATION: 44.1 MBq/ml
 1190.9 μCi/ml

RADIOCHEMICAL PURITY: ≥ 95%

MOLECULAR WEIGHT: 385.2

PACKAGING: [¹²⁵I]-RTI-55 is in a solution containing ethanol:water:acetonitrile (1:1:0.1). It is shipped ambient.**STABILITY AND STORAGE:** [¹²⁵I]-RTI-55 should be stored at 4°C or lower. Under these conditions the product is stable and usable for at least sixteen weeks after fresh lot date.

SPECIFIC ACTIVITY: The initial specific activity of [¹²⁵I]-RTI-55 is 2200 Ci/mmol, (81 TBq/mmol), 5711 μCi/μg (211 MBq/μg). Preparative HPLC separates unlabeled precursor from [¹²⁵I]-RTI-55. Upon decay, [¹²⁵I]-RTI-55 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 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: β-(4-trimethylstannylphenyl)-tropane-2β -carboxylic acid methyl ester is radioiodinated with no carrier added ¹²⁵I using a modification of the Moerlein and Coenen method^{6,7} and purified by reversed phase HPLC.

AVAILABILITY: [¹²⁵I]-RTI-55 is routinely available from stock and is prepared fresh and packaged for shipment on the fourth Monday of February, April, June, August, October, and December. Please inquire for larger package sizes.

APPLICATIONS: [¹²⁵I]-RTI-55 serves in receptor binding assays; binds with high affinity at the dopamine transporter sites: K_d = 0.11 nM for high affinity site and 2.57 nM for low affinity site.⁸ Several properties--high specific activity

Package Size Information

Package Size as of 2-May-2025	Volume
925 kBq 25 μCi	0.05 ml
9.25 MBq 250 μCi	0.50 mL

sites. $K_d = 0.11$ nM for high affinity site and 2.37 nM for low affinity site. Several properties--high specific activity, superior affinity, and strong selectivity--make [125 I]-RTI-55 an excellent radioligand for the study of the dopamine transporter sites using either tissue homogenates or autoradiographic methods--especially in regions of low receptor density. In addition, [125 I]-RTI-55 readily crosses the blood-brain barrier.⁹

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 flammable and explosive may be fatal if swallowed or inhaled (4000 ppm dangerous to life or health). This component causes central nervous depression and may be poisonous upon decomposition.

RADIATION UNSHIELDED: 280mR/hr/mCi at vial surface.

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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
0	1	0.977	0.955	0.933	0.912	0.891	0.871	0.851	0.831
20	0.794	0.776	0.758	0.741	0.724	0.707	0.691	0.675	0.66
40	0.63	0.616	0.602	0.588	0.574	0.561	0.548	0.536	0.524
60	0.5	0.489	0.477	0.467	0.456	0.445	0.435	0.425	0.416
80	0.397	0.388	0.379	0.37	0.362	0.354	0.345	0.338	0.33
100	0.315	0.308	0.301	0.294	0.287	0.281	0.274	0.268	0.262
120	0.25	0.244	0.239	0.233	0.228	0.223	0.218	0.213	0.208

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.

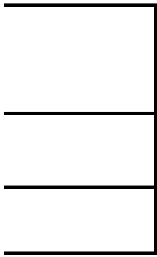
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18
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0.645
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