[^{125}I]-Tyr^{4}-BOMBESIN

Product Number: NEX258

[^{125}I]-Bombesin

pGlu-Gln-Arg-[^{125}I]-Tyr-Gly-Asn-Gln-Trp-Ala-Val-Gly-His-Leu-Met-NH_2

LOT SPECIFIC INFORMATION

CALCULATED AS OF: 26-Feb-2024

LOT NUMBER: EU32940

SPECIFIC ACTIVITY: 81.4 TBq/mmol
2200 Ci/mmol
45.4 MBq/µg
1226 µCi/µg

CONCENTRATION: 3.12 MBq/ml
84.2 µCi/ml

RADIOCHEMICAL PURITY: ≥ 95%

MOLECULAR WEIGHT: ~1,794

Package Size Information

Package Size as of 29-Mar-2024	Volume
370 kBq 10 µCi	0.20 ml
1.85 MBq 50 µCi	1.00 mL

PACKAGING: [^{125}I]-Bombesin is in a solution containing 0.05M sodium phosphate, 0.25% BSA, and a stabilizer (pH 3.4): n-propanol, 1:1. It is shipped on dry ice.

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

SPECIFIC ACTIVITY: The initial specific activity of [^{125}I]-Bombesin is 2200 Ci/mmol, (81 TBq/mmol), 1230 µCi/µg (46 MBq/µg). Preparative HPLC is used to separate unlabeled bombesin from [^{125}I]-Bombesin. Upon decay, [^{125}I]-Bombesin 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: [Tyr^4]-bombesin is radioiodinated using no carrier added ^{125}I by a lactoperoxidase procedure and purified by HPLC. Amino acid analysis indicates that this product is monoiodinated exclusively on Tyr^4.

AVAILABILITY: [^{125}I]-Bombesin 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.

APPLICATIONS: [^{125}I]-Bombesin will be useful as a tracer in RIA's for bombesin like peptides, and as a high specific activity ligand in receptor studies.

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.

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).

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	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	0.63	0.616	0.602	0.588	0.574	0.561	0.548	0.536	0.524	0.512
60	0.5	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	0.25	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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