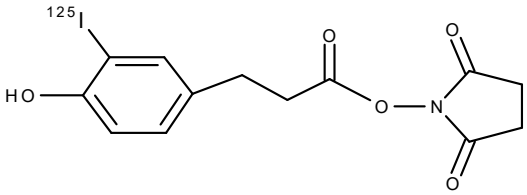
N-succinimidyl-3-(4-hydroxy-3-[^{125}I]iodophenyl)propionate [^{125}I]-Bolton-Hunter Reagent (monoiodinated) [^{125}I]-BHR

Product Number: NEX120



LOT SPECIFIC INFORMATION CALCULATED AS OF: 2-Sep-2024

LOT NUMBER: BA92740

SPECIFIC ACTIVITY: 81.4 TBq/mmol 210 MBq/µg
2200 Ci/mmol 5682 µCi/µg

RADIOCHEMICAL PURITY: ≥ 95% **MOLECULAR WEIGHT:** 387.2

Package Size Information

Package Size as of 27-Sep-2024	Concentration on 2-Sep-2024	Volume
9.25 MBq 250 µCi	144 MBq/ml 3.89 mCi/ml	0.100ml
37.0 MBq 1 mCi	57.6 MBq/ml 15.6 mCi/ml	0.100ml
74.0 MBq 2 mCi	1.05 GBq/ml 28.3 mCi/ml	0.100ml

PACKAGING: [^{125}I]-BHR is supplied in anhydrous 2-methyltetrahydrofuran with 250 ppm BHT (butylated hydroxytoluene) stabilizer in a NENSURE™ vial. A charcoal trap is provided with each vial.

STABILITY AND STORAGE: [^{125}I]-BHR should be stored in the shipping vial at ambient or lower temperature. Under these conditions, radiochemical impurities increase at a rate of approximately 5% per week. The reagent may be used for protein labeling for at least three weeks after fresh lot date.

SPECIFIC ACTIVITY: The initial specific activity of [^{125}I]-BHR is 2200 Ci/mmol, (81 TBq/mmol), 5700 µCi/µg (210 MBq/µg). Preparative HPLC is used to separate unlabeled succinimidyl-3-(p-hydroxyphenyl)propionate and di[^{125}I]-BHR from [^{125}I]-BHR. Upon decay, [^{125}I]-BHR 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. References on ^{125}I decay and decay catastrophe of ^{125}I labeled compounds are available.[1-6]

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

PREPARATIVE PROCEDURE: Succinimidyl-3-(p-hydroxyphenyl)propionate is radioiodinated with no-carrier-added ^{125}I

PREPARATIVE PROCEDURE: Succinimidyl-3-(p-hydroxyphenyl)propionate is radioiodinated with no carrier added ^{125}I using a modification of the chloramine T method,[7-10] and is purified by reversed-phase HPLC.

AVAILABILITY: [^{125}I]-BHR is prepared fresh each week and is routinely available from stock. Please inquire for larger package sizes.

HAZARD WARNING: This product contains a chemical (s) known to the state of California to cause cancer.

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

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. Doran, A.C., Wan, Y-P, Kopin, A.S., Beinborn, M., *Biochem. Pharm.* 65 1515-20 (2003).
7. Rudinger, J. and Ruegg, U., *Biochem. J*. 133 538-539 (1973).
8. Bolton, A.E. and Hunter, W.M., *Biochem. J.* 133 529-539 (1973).
9. Bolton, A.E., Bennie, J.G., Hunter, W.M., "Innovations in Labelling Techniques for Radioimmunoassays", Proceedings of the 24th Colloquium Brugge, 687-693 (1976).
10. Hunter, W.M. and Greenwood, F.C., *Nature* 194 495 (1962).

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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