

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

**[¹²⁵I]-BOLTON HUNTER LABELED PROTEIN G
(RECOMBINANT)**

Product Number: NEX237

[¹²⁵I]-rProtein G

LOT SPECIFIC INFORMATION

CALCULATED AS OF:	28-Mar-2011
LOT NUMBER:	EA42910
SPECIFIC ACTIVITY:	0.77 MBq/μg 20.7 μCi/μg
CONCENTRATION:	5.89 MBq/ml 159.1 uCi/ml
RADIOCHEMICAL PURITY:	≥ 95%

Package Size Information

Package Size as of 29-Apr-2011	Volume
370 kBq 10 μCi	0.10 ml
1.85 MBq 50 μCi	0.50 ml
3.70 MBq 100 μCi	1.00 ml

PACKAGING: [¹²⁵I]-rProtein G is in a solution containing 0.05M sodium phosphate, 0.15M NaCl, 1M glycine, 0.1% BSA at pH 5.2. It is shipped on dry ice.

STABILITY AND STORAGE: [¹²⁵I]-rProtein G should be stored at -20°C or lower. Under these conditions the product has been found to be useful in dot-blot immunoassays for at least six weeks. Specific binding to solid phase IgG is >90% after six weeks.

SPECIFIC ACTIVITY: 15-25 μCi/μg (0.5-0.9 MBq/μg) on fresh lot date as determined from [¹²⁵I]-Bolton-Hunter Reagent incorporation into Protein G. Specific activity decays with time.

RADIOCHEMICAL PURITY: Initially less than 5% unbound iodide as determined by thin layer chromatography.

PREPARATIVE PROCEDURE: Protein G, recombinant (Gammabind-2™, Genex Corp.) is radioiodinated using [¹²⁵I]-Bolton Hunter reagent (monoiodinated)¹ and is purified by size exclusion HPLC using Zorbax® Bio Series GF-250 columns. [¹²⁵I]-Bolton Hunter reagent typically labels lysine residues.

AVAILABILITY: [¹²⁵I]-rProtein G 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: [¹²⁵I]-rProtein G is useful in the quantitation of antigen-antibody complexes and as a general second antibody. It has been used in dot-blot assays with nitrocellulose membranes. High specific binding has been observed to rabbit, mouse, goat, sheep, cow, and human IgG's and to human IgG subclasses IgG₁, IgG₂, IgG₃ and IgG₄. Protein G does not bind to IgM, IgA, IgD or chicken IgG². For reviews and general protein G references see 3-8.

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.

REFERENCES:

1. Bolton, A.E. and Hunter, W.M. *Biochem. J.* 133 529-534 (1973).
2. Fahnestock, Dr. S. Genex corporation, Gaithersburg MD personal communication.
3. Bjork, L. and Kronvall, G. *J. Immunology* 133 969-974 (1984).
4. Fahnestock, S.R. *TIBTECH* 5 79-83 (1987).
5. Boyle, M.D. and Reis, K.J. *Biotechnology* 5 697-703 (1987).
6. Akerstrom, B. and Bjorck, K.J. *J.B.C.* 261 10240-10247 (1986).
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8. Guss, B., Eliasson, M., Olsson, A., Uhlen, M., Frej, A.K., Ornvall, H.J., Flock, J.I. and Lindberg, M. *Journal of Embryology* 5 1567-1575 (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	1.000	.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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