TECHNICAL DATA SHEET

^{125}I

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

[^{125}I]-r Protein A

Product Number: NEX146

LOT SPECIFIC INFORMATION:

CALCULATED AS OF: 20-Jun-2011

LOT NUMBER: BR72210

SPECIFIC ACTIVITY:
112.3 TBq/mmol
3034.3 Ci/mmol
2.7 MBq/µg
72.2 µCi/µg

CONCENTRATION:
3.1 MBq/ml
82.7 µCi/ml

UNBOUND IODIDE: <5% unbound iodine

MOLECULAR WEIGHT: ~ 42,000

Package Size Information

Package Size as of 22-Jul-2011	Volume
370 kBq 10 µCi	0.20 ml
925 kBq 25 µCi	0.50 ml

PACKAGING: [^{125}I]-rProtein A is in 0.05M sodium phosphate buffer, pH 4.0, containing 35% ethanol. Each vial contains an anion exchange resin strip. It is shipped ambient.

STABILITY AND STORAGE: [^{125}I]-rProtein A should be stored at 4°C. Under these conditions, the product has been shown to be useful in Western blots for at least three weeks. Specific binding to solid phase IgG is >80% after three weeks. An anion exchange resin strip is included in each vial to maintain a low free iodide concentration throughout the product's shelf life.

SPECIFIC ACTIVITY: 70-100 µCi/µg (2.59-3.7 MBq/µg) on fresh lot date as determined from ^{125}I incorporation into rProtein A. Specific activity decays with time.

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

PREPARATIVE PROCEDURE: Ultrapure rProtein A™ (Repligen) is radioiodinated with no carrier added ^{125}I using a modification of the Hunter and Greenwood method[1] and is purified by ion-exchange chromatography. This method predominantly labels tyrosine residues.

AVAILABILITY: [^{125}I]-rProtein A is routinely available from stock and is prepared fresh and packaged for shipment on the first and third Mondays of each month. Please inquire for larger package sizes.

APPLICATIONS: [^{125}I]-rProtein A is used to detect proteins in Western blots[2] with GeneScreen™ and GeneScreen™Plus membranes. In this rapid method, NEX-146 exhibits almost no non-specific binding[3,4]. Quantitation of antigen-antibody complexes[5] and use as a general second antibody in radioimmunoassay[6] are among the numerous applications of [^{125}I]-rProtein A. It provides an ideal tool for rapid evaluation of clones generated using hybridoma techniques. High-specific-activity [^{125}I]-rProtein A may aid detection sensitivity. For reviews and general Protein A references, see 5-8.

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, ingestion and inhalation. It is irritating to the eyes, skin and respiratory tract, is slightly toxic and flammable. Target organ is the central nervous system.

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

REFERENCES:

1. Hunter, W.M. and Greenwood, F.C., *Nature* 194 495 (1962).
2. Burnette, W.N., *Analytical Chem*. 112 195-203 (1981).
3. NEN® Research TIPS (#E-94753) New Procedure for Electrophoretic Transfer of Proteins (Western Blot) for Genescreen™ and Genescreen™ Plus.
4. NEN® Research Tips (#E-94754) Western Blotting: Troubleshooting.
5. Goding, J.W., *J. Immunological Methods* 20 241 (1978).
6. Langone, J.J., *J. Immunological Methods* 24 269 (1978).
7. Renart, J., Reiser, J. and Stark, G.R., *Proc. Natl. Acad. Sci. USA* 76 3116-3120 (1979).
8. Wang, H.P. and Mayer, P.C., *J. Immunological Methods* 72 61-70 (1984).

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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