Qty: 25 ml
rec-Protein G-Sepharose® 4B Conjugate
Catalog No. 10-1243
Lot No.: See product label
Exp. Date: See product label

rec-Protein G-Sepharose® 4B Conjugate

FORM

This product is supplied as a 50% suspension containing 25 ml rec-Protein G-Sepharose® 4B + 25 ml PBS (10 mM phosphate-buffered saline, pH 7.4, containing 0.1% Proclin preservative. This product is prepared by covalently coupling highly purified rec-Protein G (produced in *E. Coli*) to Sepharose® 4B.

DESCRIPTION

Protein A and Protein G bind specifically to Fc regions of many mammalian immunoglobulins. Protein A and Protein G conjugates are commonly used as affinity adsorbents to purify immunoglobulins (antibodies) and immunoglobulin subtypes from serum, hybridoma ascites fluids, tissue culture supernatants and other biological fluids. These reagents are also commonly used to capture immune complexes generated in immunoprecipitation experiments. Because Protein A and Protein G vary widely in their abilities to bind individual immunoglobulins, consult the table below before proceeding with your application. It should be noted that the Fc binding characteristics of naturally produced Protein A and Protein G are identical to their recombinant counterparts. However, also note that Invitrogen's recombinant Protein G products are deleted for two albumin binding sites present in the wild type molecule. For certain procedures, it may be advantageous to use a light chain binding reagent (e.g. Invitrogen's Kappalock™ products) instead of Protein A or Protein G.

SPECIFICATIONS

rec-Protein-G/Sepharose® ratio: ~2.5 mg rec-Protein G per ml beads
Binding capacity: ~18 mg Rabbit IgG per ml beads
rec-Protein G molecular weight.: 22 kDa (migrates as 32-36 by SDS-PAGE)
Ig Binding Sites/molecule rec-Protein G: 2 per molecule
Albumin binding sites/molecule rec-Protein G: none

Binding Characteristics of Immunoglobulins to Protein A and Protein G

Species	*Protein A*	*Protein G*	*Species*	*Protein A*	*Protein G*	*Species*	*Protein A*	*Protein G*
Cat IgG	+++	+	Human IgA2	+	-	Mouse IgG2b	+++	+++
Chicken IgG	-	-	Human IgD	-	-	Mouse IgG3	++	+++
Cow IgG	+	+++	Human IgE	++	-	Mouse IgM	-	-
Cow IgG1	+	+++	Human IgG	+++	+++	Rat IgG	+	++
Cow IgG2	+++	+++	Human IgG1	+++	+++	Rat IgG1	-	+
Dog IgG	+++	+	Human IgG2	+++	+++	Rat IgG2a	-	+++
Goat IgG	+	++	Human IgG3	-	+++	Rat IgG2b	-	+
Goat IgG1	+	+++	Human IgG4	+++	+++	Rat IgG2c	++	++
Goat IgG2	+++	+++	Human IgM	+	-	Rabbit IgG	+++	+++
Guinea Pig IgG	+++	+	Monkey IgG	+++	+++	Sheep IgG	+	++
Hamster IgG	+	++	Pig IgG	+++	++	Sheep IgG1	+	++
Horse IgG	+	+++	Mouse IgG	++	++	Sheep IgG2	+++	+++
Human IgA	+	-	Mouse IgG1	+	++			
Human IgA1	+	-	Mouse IgG2a	+++	+++			

+++, ++, +, --: strong binding, moderate binding, weak binding, no binding, respectively.

(cont'd)

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PROCEDURES:

Recommended procedures for immunoglobulin affinity purification and immunoprecipitation using our Protein A and Protein G products are available on our Web site at www.invitrogen.com/content.cfm?pageid=10678. Hard copy is available on request from Invitrogen Technical Services by phone at (800) 874-4494 or by email to tech.Invitrogen.com. An excellent source for information on antibodies in general and on most routine laboratory procedures involving antibodies is Antibodies, A Laboratory Manual, Ed Harlow and David Lane, Eds., Cold Spring Harbor Laboratory (1999).

STORAGE:

Store at 2-8°C. **Do Not Freeze.** Freezing this product will damage or destroy its performance.

SELECTED INVITROGEN PRODUCT REFERENCES

Immunoprecipitation

1. Dikic I, et al. *Nature* 383(6600):547-550, 1996.
2. Streuli CH, et al. *Cell* 69:927-938, 1995.
3. Goi K, et al. *Cancer Research* 57(10):1895-1902, 1997.
4. Elliott JG, et al. *J Biol Chem* 272(21):13849-13855, 1997.
5. Inohara H, et al. *Cancer Research* 56:4530-4534, 1996.
6. McConnell KR, et al. *J Immunol* 158:2083-2089, 1997.

Affinity Puriication

7. Sakuai T, et al. *J Cell Biol* 136:907-918, 1997.
8. Lasky L, et al. *Cell* 69:927-938, 1992.

RELATED PRODUCTS

Product	***Cat. No.***
Protein A-Sepharose® (5 ml)	10-1041
Protein A-Sepharose® (25 ml)	10-1042
Rec-Protein A-Sepharose® (25 ml)	10-1142
MonoAb rec-Protein A Column Kit	10-1160
Zysorbin™ (fixed, killed Protein A-bearing *Staph. aureus* for IP, 10 ml)	10-1051-1
Zysorbin™ (fixed, killed Protein A-bearing *Staph. aureus* for IP, 100 ml)	10-1051-3
Rec-Protein G-Sepharose® (2 ml)	10-1241
Zysorbin-G (fixed, killed Protein G-bearing Streptococci for IP, 10 ml)	10-1352
Kappalock™-Sepharose (binds to mammalian kappa light chains, 2 ml)	10-1841

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Explanation of symbols

Symbol	Description	Symbol	Description
REF	Catalogue Number	LOT	Batch code
RUO	Research Use Only	IVD	*In vitro* diagnostic medical device
	Use by		Temperature limitation
	Manufacturer	EC REP	European Community authorised representative
[-]	Without, does not contain	[+]	With, contains
	Protect from light		Consult accompanying documents
	Directs the user to consult instructions for use (IFU), accompanying the product.		

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