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Datasheet for PAG50-00-0002

Sepharose™ Protein A/G

Overview

Description:	Sepharose™ Protein A/G - PAG50-00-0002
Item No.:	PAG50-00-0002
Size:	2 mL
Applications:	ChIP, IP
Origin:	Staphylococcus aureus, Streptococcus sp.

Product Details

Background:	Sepharose™ Protein A/G can be used for immunoprecipitation and purification of monoclonal antibodies. Sepharose™ Protein A/G is a suspension of sepharose beads containing binding domains from both protein A (from Staphylococcus aureus) and protein G (from Streptococcus sp.). When evenly dispersed approximately 2.0 ml of suspension is equal to 0.5 cc of settled beads of Sepharose™ 4 Fast Flow (highly cross linked, 4% agarose derivative). The bead size is approximately 45-165 µm when swollen. Each cc of drained beads will bind approximately 20-30 mg Human IgG. The exclusion limit (Mr) of the beads is 3 x 10^7. The maximum linear flow rate is approximately 1300 cm/hr. This product shows long term stability within pH range of 3 to 9 and short term stability within pH range of 2 to 10. Up to 100 reactions per 2ml.
Synonyms:	Sepharose Protein A/G, Protein AG, agarose, ProA-ProG, Staphylococcus A protein, Sepharose Protein A, Streptococcus G protein, Sepharose Protein G, immunoprecipitation, IP western blot
Species of Origin:	Staphylococcus aureus, Streptococcus sp.
Conjugate:	Sepharose™
Type:	Recombinant Protein

Target Details

Purity/Specificity:	The product can be used for binding IgG from human, rabbit, goat, mouse and rat. It has strong binding of human, rabbit, cow, sheep, and goat polyclonal antibodies, mouse IgG2a, IgG2b, IgG3, and rat IgG2a. Protein A/G also has moderate affinity for mouse and rat IgG1 and IgG2c. It binds with weak affinity to rat IgG2b. Sepharose™ Protein A/G can be used for immunoprecipitation and purification of monoclonal antibodies.
Relevant Links:	• UniProtKB - P38507

- UniProtKB - P19909
- Sepharose-Protein-A/G-Protocol-PAG50-00-0002

Application Details

Suggested Applications:	ChIP, IP (Based on references)
Application Note:	Protein A/G resin may also be used to pull down antibody:antigen complexes in immunoprecipitation experiments. This product is suitable for use at 20 µL per immunoprecipitation reaction.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
IP:	User optimized
WB:	User Optimized
Other:	The conjugate is provided as a suspension with 0.5 ml sepharose per 1 ml of suspension and is blocked with BSA to reduce non-specific immunoglobulin binding.

Formulation

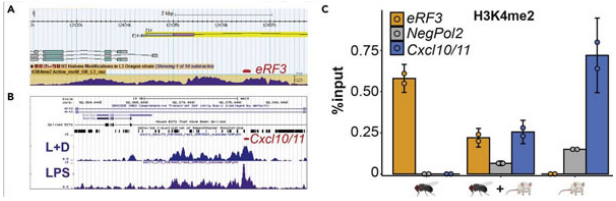
Physical State:	Suspension of agarose beads
Concentration:	0.5cc drained Sepharose per 2ml slurry
Buffer:	20% (v/v) Ethanol

Shipping & Handling

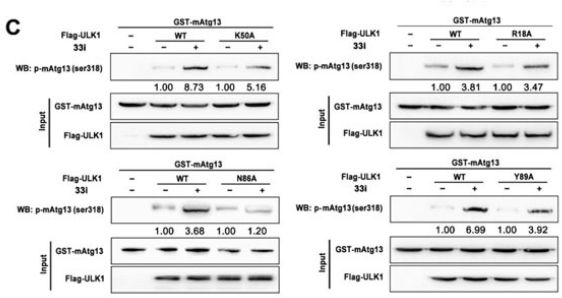
Shipping Condition:	Wet Ice
Storage Condition:	Store SEPHAROSE PROTEIN A/G at 4° C prior to opening. DO NOT FREEZE.
Expiration:	Expiration date is one (1) year from date of receipt.

Images

Bottle
Sepharose™ Protein A/G



ChIP
Selection and testing of species-specific PCR primers.
(A) Drosophila melanogaster genome browser screen shot showing publicly available data for H3K4me2 ChIP-Seq at the eRF3 locus.
(B) UCSC genome browser track for H3K4me2 ChIP-Seq in murine bone marrow derived macrophages after 3 h 100 ng/mL LPS (purple, lower track) or 16 h 1 µM dexamethasone and 3 h 100 ng/mL LPS treatment (L+D, blue, upper track).
(C) ChIP-qPCR against H3K4me2 in either pure S2 cells (indicated by the fly), 25% S2 cells mixed with 75% murine macrophages treated with 100 ng/mL LPS for 3 h (marked by the fly + mouse symbol) or pure murine macrophages treated with LPS (marked by the mouse symbol). The mean of two biological replicates is plotted. Dots represent single data points, and error bars reflect the standard deviation. The color indicates the locus. (A+B) The red lines indicate the fragments amplified by PCR in C. The DNA sequence of the regions covered by the H3K4me2 signal in both species was used as input for Primer-BLAST, in order to design the primers for C. Figure 2. PMID: 34189474.



Immunoprecipitation
Identification of the key amino acids between ULK1 and 33i. (C) Flag-tagged ULK1WT and ULK1 mutants were expressed in HEK-293T cells and immunoprecipitated by anti-Flag antibody, then incubated with GST-tagged mAtg13 in a kinase reaction buffer in the presence or absence of 33i. The reaction was stopped and analyzed by Western blot with p-mAtg13 antibody. Fig 3. PMID: 29561612.

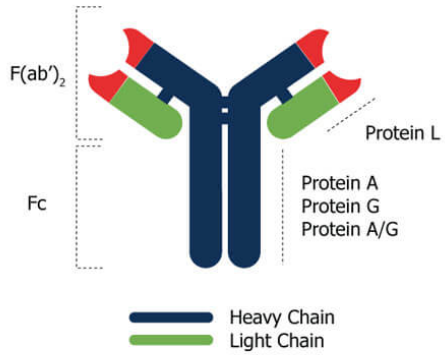


Figure
Antibody-binding protein specificity for Protein A, Protein G, and Protein A/G which demonstrate binding specificity to IgG immunoglobulin through an interaction in the Fc region of the heavy chain domain. Protein A and G each show some preferences to certain types of antibody subclasses, and proper reagent selection may be required, Protein A/G offers the widest range of antibody subclass binding. Another immunoglobulin binding protein is Protein L which binds to the kappa light chain of the F(ab')2 region.

References

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