Protein A Resin

Catalogue No.:abx098111

Protein A Resin is an affinity chromatography resin with high binding capacity for IgG. Protein A Resin is suitable for purification of monoclonal antibodies, polyclonal antibodies and immunology complexes, such as IP and Co-IP. The recombinant protein A ligand is coupled to 4% highly cross-linked agarose.

Specifications:

- Resin: Cross-linked 4% agarose
- Ligand: Recombinant Protein A
- Shape: Sphere
- Pore Size: 90 µm (45-165)
- Support Density: 6 mg Protein A/ml wet gel
- Binding Capacity: 40-50 mg h-IgG/ml wet gel
- Maximum Flow Rate (25 °C): 300 cm/h
- Recommended Flow Rate: < 150 cm/h
- Highest Resisistance of Atmospheric Pressure: 0.3 MPa
- pH Stability: 3-10

Affinity of Protein A/G for IgG types:

Source	IgG Subtype	Affinity for Protein A	Affinity for Protein G
Human	IgG_1	++++	++++
Human	IgG_2	++++	++++
Human	IgG_3	-	++++
Human	IgG_4	++++	++++
Mouse	IgG_1	+	++++
Mouse	IgG_{2a}	++++	++++
Mouse	IgG_{2b}	+++	+++
Mouse	IgG_3	++	+++
Rabbit	IgG	++++	+++
Goat	IgG	-	++
Horse	IgG	++	++++
Dog	IgG	++	+
Cow	IgG	++	++++
Pig	IgG	+++	+++
Monkey	IgG	++++	++++

Target: Protein A Resin

Storage: Store at 2-8 °C (with 20% ethanol) for up to 2 years.

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Buffer: Note: Buffers are not included with this product.
Equilibration Buffer: 20 mM PBS, 150 mM KCl, pH 7.0
Elution Buffer: 20 mM citric acid, pH 3.0-4.0; or 100 mM glycine, pH 3.0; or 20 mM sodium acetate, pH 3.0-4.0
Neutralisation Buffer: 1 M Tris-HCl, pH 9.0

Note: THIS PRODUCT IS FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC, THERAPEUTIC OR COSMETIC PROCEDURES. NOT FOR HUMAN OR ANIMAL CONSUMPTION.

Directions for use:

Preparing the Protein A purification column:

1. Thoroughly resuspend the protein A resin to achieve a homogeneous suspension of the resin in 20% ethanol storage buffer.
2. Immediately transfer the resin into a purification column. Ensure that the bottom of the column is plugged with a stopper. Close the value of the column and allow the resin to settle.
3. Equilibrate the column with 5-10 bed volume of equilibration buffer.

Preparing samples:

To avoid blocking the column, samples should be centrifuged and filtered through a 0.45 µm filter before loading.

Loading samples and washing:

Load samples and wash with 5-10 bed volume of equilibration buffer, and collect the flow-through in a tube

Elute:

Elute antibodies with elution buffer. Collect the elution containing the target immunoglobulin and immediately neutralise to pH > 7.0 with neutralisation buffer. The elution conditions are closely related with binding strength and stability of antibody. When necessary, optimise the elution buffer.

Regeneration of Protein A resin:

1. Either:
   - Wash the column/resin with 3-5 bed volume of 0.1 M citric acid, or 0.1 M citric acid with 20% ethanol, and then 5 bed volume of PBS (pH 7.0); or
   - 3-5 bed volume of 0.05 M NaOH with 1 M NaCl, or 6 M GuHCl, and then 5 bed volume of deionised water.
2. Store the column/resin in 20% ethanol.

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