GeloPure A+

Affinity Chromatography Media

Technical Datasheet

2464 Norwood street SW,
Lenoir, North Carolina – 28645.USA

GeloPure A+

GeloPure A+ resin is basically rProtein A immobilised agaose based an affinity chromatography media used for the purification of immunoglobulins (IgG), primarily monoclonal antibodies. The ligand, recombinant Protein A or native Protein A, is immobilized on a spherical crosslinked agarose resin for high binding capacity

Ligand	Recombinant Protein A
Matrix	Crosslinked agarose beads
Particle diameter (mm)	30-165 μm
Ligand Coupling	Covalent coupling via multipoint attachment
Dynamic Binding Capacity	>65mg/mL
Recommended CIP solution	0.2(M) NaOH, 0.2(M) NaOH in 20% EtOH, 0.2(M) NaOH in 95%EtOH
pH stability range	1～13
Storage	2～8 ºC in 20 % ethanol
Shelf Life	Typically 2 years unopened

3.2 Binding Mechanism of Protein A Resin

Protein A is a cell wall protein originally derived from *Staphylococcus aureus*. It specifically binds to the **Fc region of immunoglobulin G (IgG)** molecules, making it ideal for antibody purification.

3.3 Applications of Protein A Resin

Protein A resin is considered the industry standard for capturing and purifying monoclonal antibodies (mAbs) and is widely used from R&D to commercial manufacturing.

- Monoclonal Antibody Purification: Capture step in downstream processing of therapeutic antibodies.Achieves high purity (>95%) in a single step. Applied in mAbs production in CHO or hybridoma systems.
- Polyclonal IgG Purification: From serum or plasma (e.g., rabbit, human, mouse). Ideal for research and diagnostic antibody isolation.
- Antibody Fragment Purification: Can purify Fc-containing fragments like F(ab')2. Note: Fab fragments (without Fc) do not bind to Protein A.

3.4 Advantages of Using Protein A Resin

High selectivity for Fc region → high purity in one step.

High dynamic binding capacity (DBC10% ≥ 30–70 mg/mL).

Robust chemical stability → reusable for multiple cycles (up to 100+).

Compatible with CIP using NaOH, low pH elution, and other bioprocess conditions