

Amsphere® A3 Chromatography Resin

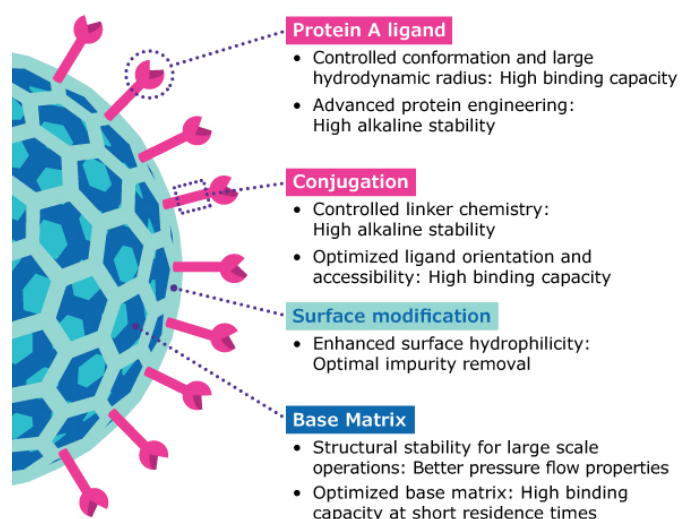
A proven Protein A solution for reliable purification of antibodies and derivatives

Protein A capture chromatography efficiently purifies antibodies from complex mixtures of host cell proteins, DNA, media components, and other impurities through highly specific affinity binding interactions.

The Amsphere® A3 resin enhances this primary capture step by offering high capacity, robust process performance and extended resin lifetime enabling biomanufacturers to achieve higher productivity and reliable antibody purification.

Key Benefits

- High Dynamic Binding Capacity (DBC) optimized for high-titer processes and process intensification
- Excellent productivity and cost-of-goods optimization at manufacturing scale
- Platform affinity resin for standard mAbs and antibody derivatives including bi-specifics, Fc-fusions, fragments, and variable domains of heavy-chain-only antibodies (VHH)



Technical Characteristics

	Amsphere® A3 Resin
Type of Chromatography	Protein A Affinity Chromatography
Base material	Methacrylic copolymer
Average particle size (d50)	~50 µm
Functional group/ Ligand	Recombinant Protein A expressed in <i>Escherichia coli</i>
Dynamic Binding Capacity (DBC)	~54 mg/mL at 4 min residence time (RT) and 10% breakthrough (BT)
Recommended bed height (BH) range	5–20 cm
Working pH range	1–13
Shipping buffer and Recommended storage buffer	50 mM sodium phosphate buffer containing 16% Ethanol, pH 7.5
Storage temperature	+2 °C to +8 °C

Enhanced Productivity

The semi-rigid bead structure and narrow particle size distribution of Amsphere® A3 resin allow high flow rates while the optimized pore size and high ligand density enable higher binding capacities and improve productivity for large scale manufacturing and intensified processing.

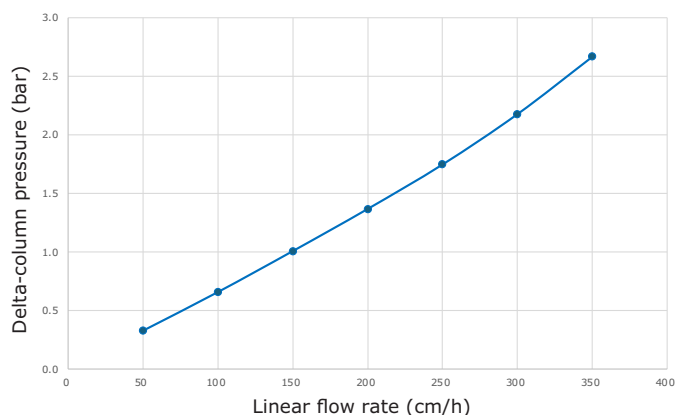


Figure 1. Changes in column pressure with flow rate in 60 cm Axichrom™ column containing Amsphere® A3 Protein A chromatography resin. Column bed height: 20.3 cm, compression factor: 1.25.

Well-established Protein A Solution for Antibody Capture

Amsphere® A3 is a Protein A resin that delivers strong purification performance for a broad range of mAbs and antibody derivatives including Bi-specifics, Fc-fusion, fragments, VHH single-domain antibodies. The high binding capacity and excellent productivity make it ideal for templated operations, where speed and minimal optimization are key.

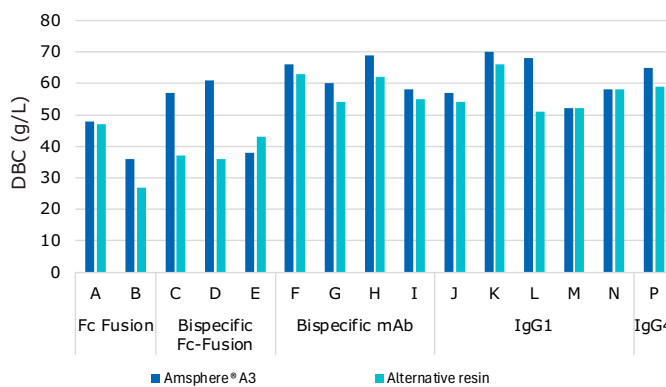


Figure 3. DBC (g/L) of Amsphere® A3 and alternative Protein A resin with different classes of antibody molecules.

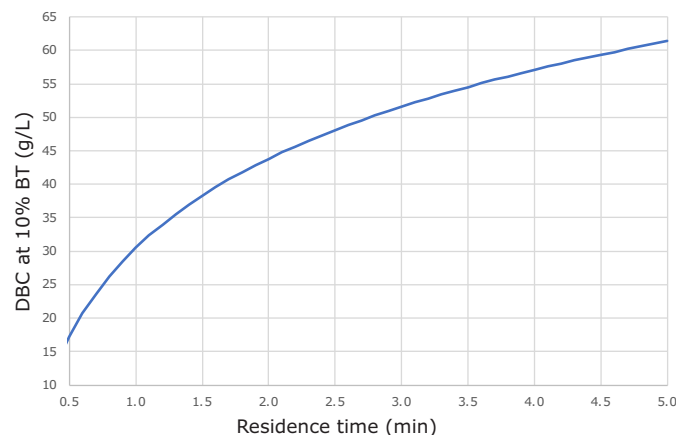


Figure 2. DBC (g/L) of Amsphere® A3 resin at different RT. DBC represents the mean value from data with 25 mAbs.



Ordering information

Description	Cat. No.
Amsphere® Bulk Resin	
Amsphere® A3 25 mL	BP-AMS-A3-0025
Amsphere® A3 50 mL	BP-AMS-A3-0050
Amsphere® A3 500 mL	BP-AMS-A3-0500
Amsphere® A3 5 L	BP-AMS-A3-5000
Amsphere® Prepacked Columns	
Amsphere® A3 in Minichrom® Column 1 mL	BP-AMS-A3-CN01
Amsphere® A3 in Minichrom® Column 5 mL	BP-AMS-A3-CN05
Amsphere® A3 in RoboColumn® 8 x 200 µL	BP-AMS-A3-CN016
Amsphere® A3 in RoboColumn® 8 x 600 µL	BP-AMS-A3-CN048



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