

# Amsphere<sup>®</sup> A3 Chromatography Resin

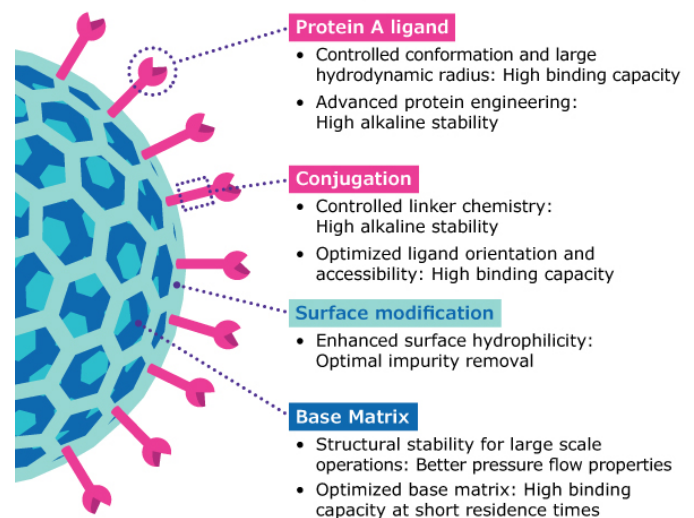
A proven Protein A solution for reliable purification of antibodies and derivatives

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<sup>®</sup> 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)

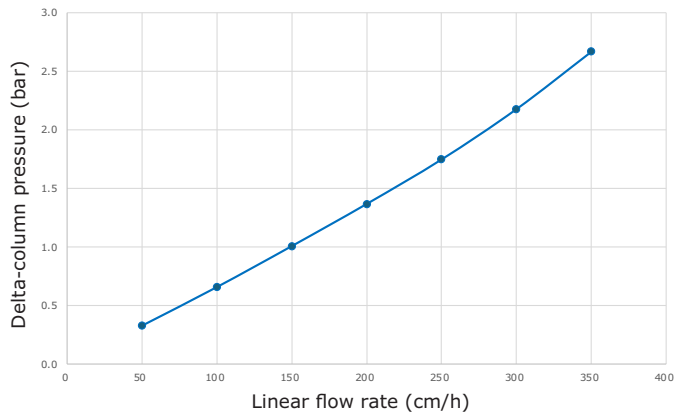


## Technical Characteristics

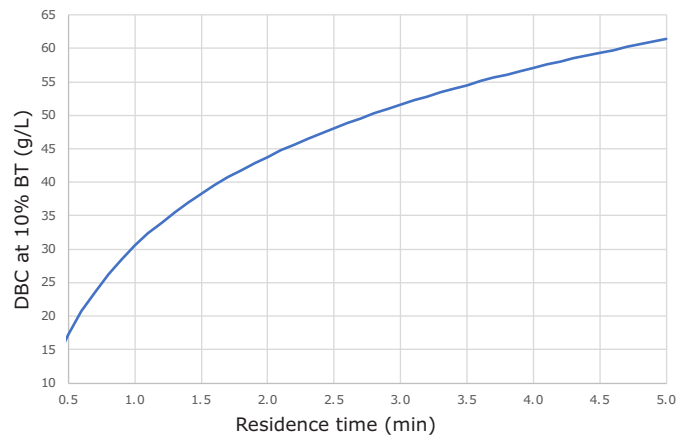
	Amsphere <sup>®</sup> A3 Resin
Type of Chromatography	Protein A Affinity Chromatography
Base material	Methacrylic copolymer
Average particle size (d50)	~50 µm
Functional group/ Ligand	Recombinant Protein A expressed in <i>Escherichia coli</i>
Dynamic Binding Capacity (DBC)	~54 mg/mL at 4 min residence 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.



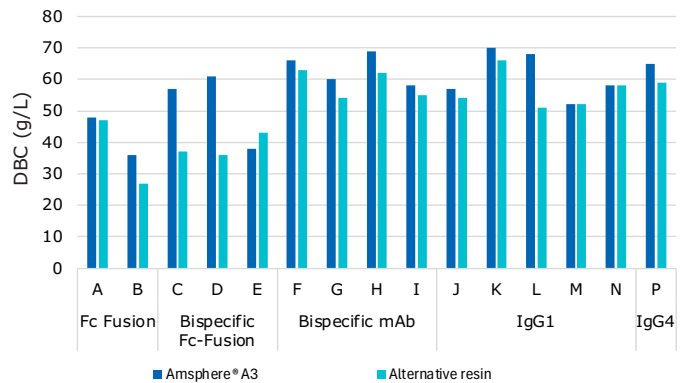
**Figure 1.** Changes in column pressure with flow rate in 60 cm Axichrom™ column containing Amsphere® A3 Protein A chromatography resin. Column bed height: 20.3 cm, compression factor: 1.25.



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

## 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.



## Ordering information

Description	Cat. No.
<b>Amsphere® Bulk Resin</b>	
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
<b>Amsphere® Prepacked Columns</b>	
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



## Chromatography Columns and Systems

Chromatography columns and systems are crucial to the successful separation of your valuable molecule. From screening to large-scale production, our columns, systems and single-use solutions are designed to provide robust, consistent performance while providing you with the processing flexibility required in today's changing production environment.



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