

MabSelect Prisma protein A chromatography resin

Product Information

Cat#No# Ma-329C

Product Overview

MabSelect Prisma affinity chromatography resin has been improved with an optimized high-flow agarose base matrix and a genetically engineered protein A-derived ligand. This allows future demands in mAb purification to be met, including processing of many bispecific antibodies.

Enhanced dynamic binding capacity allows high mass throughput of processed mAb per resin volume unit. Excellent alkaline stability enables efficient cleaning and sanitization using 0.5–1.0 M NaOH for improved process economy, bioburden control, and robustness.

Covered by a comprehensive security of supply program, including dual sources of the agarose base matrix and protein A ligand.

The Prisma protein A ligand is also available in HiTrap Fibro and HiScreen Fibro Prisma chromatography units for ultrafast purification of mAbs.

Description

MabSelect Prisma is a next-generation Protein A chromatography resin that offers significantly enhanced alkaline stability and binding capacity for improved process economy in monoclonal antibody (mAb) processing. The resin builds on the proven track record of MabSelect and MabSelect SuRe resins in commercial mAb production. In comparison with its predecessors, however, MabSelect Prisma has been improved with an optimized highflow agarose base matrix and a genetically engineered Protein A-derived ligand, allowing future demands in mAb processing to be met.

Characteristic

Enhanced dynamic binding capacity (DBC) allows high mass throughput of processed mAb per resin volume unit.

Excellent alkaline stability enables efficient cleaning and sanitization using 0.5–1.0 M NaOH for improved process economy and robustness.

Covered by a comprehensive security of supply program, including dual sources of the agarose base matrix and Protein A ligand.

Ligand Coupling Method

MabSelect Prisma protein A chromatography resin

Epoxy

Matrix

Highly cross-linked agarose, spherical.

Average particle size

60 µm

Ligand

Alkaline-stabilized protein A-derived (E.coli).

Coupling chemistry

Epoxy

Dynamic binding capacity

80 mg human IgG/mL resin at 6 min residence time. 65 mg human IgG/mL resin at 4 min residence time.

Chemical stability

Stable to commonly used aqueous buffers in protein A chromatography.

pH working range

3–12

pH CIP range

2–14

Storage

2°C to 8°C, 20% ethanol

Shipping

20% ethanol; On request 2% benzyl alcohol (BnOH).

Evaluation of Packing

The packing quality needs to be checked by column efficiency testing. The test must be done after the packing, and at regular intervals during the working life of the column, and also when the separation

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performance is deteriorated.

The best method of expressing the efficiency of a packed column is in terms of the height equivalent to a theoretical plate (HETP) and the asymmetry factor (A_s). The values are easily determined by applying a test sample such as 1% acetone solution or sodium chloride to the column.

Equilibration

Equilibrate packed columns in buffer containing 20% ethanol or 2% BnOH.

Cleaning-in-place

1. Wash the column with 3 column volumes (CV) of binding buffer.
2. Wash with at least 3 CV NaOH (0.5 to 1.0 M), with a contact time of 15 minutes.
3. Wash immediately with at least 5 CV sterile and filtered binding buffer at pH 7 to 8.

Sanitization

Sanitization reduces microbial contamination of the chromatographic bed to a minimum. MabSelect Prisma is alkali-tolerant allowing the use of NaOH as sanitizing agent. NaOH is very effective for inactivating viruses, bacteria, yeasts, and endotoxins. In addition, NaOH is inexpensive compared with other sanitizing agents.

Purification procedures

Purification performance of MabSelect Prisma was investigated and found to be similar to its predecessors MabSelect SuRe LX and MabSelect SuRe resins.

Pack size

25 mL

Maximum flow velocity

300 cm/h
