

HiTrap MabSelect Xtra

Product Information

Cat#No# Hi-020P

Product Overview

HiTrap MabSelect Xtra columns are prepacked with MabSelect Xtra, a BioProcess resin for capture of monoclonal antibodies from large sample volumes. The increased capacity of the resin is well suited for purification of Mabs from high-level expression feedstock.

Description

HiTrap MabSelect Xtra is members of the HiTrap family of prepacked columns for purification of monoclonal antibodies (mAbs).

Characteristic

Increased dynamic binding capacity with smaller particle size and greater porosity than MabSelect resin. MabSelect Xtra uses the same recombinant protein A ligand as MabSelect Oriented coupling of recombinant Protein A to the matrix via an engineered C-terminal cysteine enhances IgG binding capacity. Fewer regulatory concerns due to the total absence of mammalian culture in the ligand production and purification.

Prepacked HiTrap columns for process development, screening of purification conditions, and small-scale purification of Mabs.

Maximum operating pressure

5 bar [0.5 MPa] (70 psi)

Matrix

Highly cross-linked agarose, spherical

Average particle size

~ 75 µm

Ligand

Recombinant protein A (E. coli)

Coupling chemistry

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Epoxy

Dynamic binding capacity

~ 40 mg hIgG/mL resin

Recommended flow rate

< 4 ml/min

Recommended column height

25 mm

Chemical stability

Stable to commonly used aqueous buffers, 10 mM NaOH (pH 12), 0.1 M sodium citrate/HCl (pH 3), 6M guanidine HCl, 20% ethanol, 2% benzyl alcohol.

pH working range

3 to 10

CIP stability

3.0 to 12.4

Temperature stability

2°C to 40°C

Storage

20% ethanol, 2°C to 8°C

Shipping

20% ethanol

Binding buffer

20 mM sodium phosphate, 0.15 M NaCl, pH 7.2.

Elution buffer

0.1 M sodium citrate, pH 3.0 to 3.6.

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Cleaning-in-place

1. Wash the column with 2 column volumes of a nonionic detergent (e.g., conc. 0.1%), contact time approx. 10 min. 2. Wash immediately with at least 5 column volumes of filtered binding buffer at pH 7 to 8. or 1. Wash the column with 3 to 4 column volumes of 70% ethanol, contact time approx. 10 min. 2. Wash immediately with at least 5 column volumes of filtered binding buffer at pH 7 to 8. Apply increasing gradients to avoid air bubble formation when using high concentrations of organic solvents. or 1. Wash the column with 3 to 4 column volumes of 30% isopropanol, contact time approx. 10 min. 2. Wash immediately with at least 5 column volumes of filtered binding buffer at pH 7 to 8. Apply increasing gradients to avoid air bubble formation when using high concentrations of organic solvents.

Sanitization

1. Equilibrate the column with 0.1 M acetic acid in 20% ethanol. 2. Allow to stand for 1 hour, and wash with at least 5 column volumes of sterile binding buffer. or 1. Equilibrate the column with 70% ethanol. 2. Allow to stand for 12 hours, and wash with at least 5 column volumes of sterile binding buffer.

Scaling up

1. Select bed volume according to required sample load. Keep sample concentration constant. 2. Select column diameter to obtain the desired bed height. The excellent rigidity of the high flow base matrix allows for flexibility in choice of bed heights. 3. The larger equipment used when scaling up may cause some deviations from the method optimized at small scale. In such cases, check the buffer delivery and monitoring systems for time delays or volume changes.

Pack size

5 × 1 mL

Maximum flow velocity

4 mL/min for 1 mL and 20 mL/min for 5 mL column

Dimensions

7 × 25 mm

Column volume

1 mL



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Column i.d.

7 mm

Column hardware pressure limit

5 bar (0.5 MPa, 70 psi)

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