

HiTrap Capto MMC

Product Information

Cat#No# Hi-289P

Product Overview

HiTrap Capto MMC is prepacked with Capto MMC, a multimodal BioProcess ion exchange resin. The multimodal functionality gives a different selectivity compared with traditional ion exchangers and it binds proteins at high or low ionic strength.

Description

The multimodal functionality gives a different selectivity compared with traditional ion exchangers including binding of proteins regardless of ionic strength of the loading material. This means that the resin may be used for direct load of clarified feedstocks, without prior dilution to reduce the conductivity of the starting material. To reduce tedious sample preparation, the top filter in HiTrap Capto MMC has been optimized for loading sonicated unclarified cell lysate directly on the column.

Characteristic

High dynamic binding capacity at high conductivity.

Selectivity allows binding in the presence of salt.

High volume throughput.

HiTrap Capto MMC can be used to bind proteins at the conductivity of the feed material and to solve specific purification challenges.

Maximum operating pressure

5 bar [0.5 MPa] (70 psi)

Metal ion capacity

0.07 to 0.09 mmol H⁺ /mL resin

Matrix

Highly cross-linked agarose, spherical

Ionic Exchanger Type

Multimodal weak cation exchanger

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Average particle size

~ 75 μ m

Dynamic binding capacity

\geq 45 mg BSA/mL resin at 30 mS/cm

Recommended flow rate

1 to 4 mL/min

Recommended column height

25 mm

Chemical stability

Stable to commonly used aqueous buffers, 1M acetic acid, 1.0 M NaOH, 8 M Urea, 6 M guanidine hydrochloride, 70% ethanol, 30% isopropanol.

pH working range

3 to 12

CIP stability

3 to 14

Storage

4 to 30°C, 20% Ethanol

Elution buffer

25 mM phosphate buffer, 1 M NaCl, pH 7.5

Cleaning-in-place

1. Wash with at least 2 column volumes (CV) of 2 M NaCl.
2. Wash with at least 3 CV 1 M NaOH with at least 15 min contact time.
3. Wash with at least 2 CV 2 M NaCl.
4. Wash with at least 2 CV distilled water.
5. Wash with 5 CV start buffer or until eluent pH and conductivity have reached the required values.

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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

Dimensions

7 × 25 mm

Column volume

1 mL

Column i.d.

7 mm

Column hardware pressure limit

0.5 MPa (5 bar, 72 psi)