MBPTrap HP

Product Information

Cat#No#	MB-114P

Product Overview

MBPTrap HP columns prepacked with Dextrin Sepharose High Performance provide convenient, high binding capacity, affinity purification of recombinant proteins tagged with maltose binding protein (MBP).

Description

Dextrin Sepharose High Performance has high binding capacity for MBP-tagged proteins. This robust and stable Sepharose High Performance based resin enables elution of target protein in narrow peaks, which minimizes the need for further concentration steps.

Characteristic

Highly pure MBP-tagged recombinant proteins eluted in concentrated form and small volumes.
Compatible with commonly used buffers and easily regenerated with 0.5 M NaOH.
Physiological conditions and mild elution preserve the activity of the target protein.
Convenient, time-saving operation and reproducible results.

Maximum operating pressure

5 bar [0.5 MPa] (70 psi)

Matrix

Rigid highly cross-linked 6% agarose

Average particle size

34 µm

Ligand

Dextrin

Dynamic binding capacity

Approx. 7 mg MBP2*-paramyosin ☐Sal/ml medium (Mr ~70 000, multimer in solution) Approx. 16 mg MBP2*-☐ galactosidase/ml medium (Mr ~158 000, multimer in solution).

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Recommended flow rate
< 4 ml/min
Recommended column height
25 mm
Chemical stability
Stable in all commonly used aqueous buffers.
pH working range
> 7
CIP stability
2 to 13
Storage
2 to 8°C, 20% Ethanol
Binding buffer
20 mM Tris-HCl, 200 mM NaCl, 1 mM EDTA, pH 7.4 Optional: 1 mM DTT.
Elution buffer
10 mM maltose in binding buffer.
Regeneration
1. Regenerate the column with 3 CV distilled water followed by 3 CV 0.5 M NaOH and 3 CV distilled water. Use a flow rate of 0.5 to 1.0 ml/min or 2.5 to 5.0 ml/min for 1 ml and 5 ml columns respectively for NaOH, and 1 ml/min or 5 ml/min respectively for distilled water. 2. Re-equilibrate the column with 5 CV of binding buffer before starting the next purification.
Purification procedures
1. Fill the syringe or pump tubing with binding buffer. Remove the stopper and connect the column to the syringe (with the adapter provided) or pump tubing “drop-to-drop” to avoid introducing air into the column. 2. Remove the snap-off end at the column outlet. Wash out the ethanol with at least 5 column volumes (CV)

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of distilled water or binding buffer.
3. Equilibrate the column with at least 5 CV binding buffer at 1 ml/min or 5 ml/min for 1 ml and 5 ml columns respectively.
4. Apply the sample using a syringe fitted to the luer adapter or by pumping it onto the column*.
5. Wash with 5 to 10 CV binding buffer or until no material appears in the effluent.
6. Elute with 5 CV elution buffer. The eluted fractions can be buffer exchanged using a prepacked desalting column.

Pack size
5 × 1 mL
Dimensions
7 × 25 mm
Column volume
1 ml
Column i.d.
7 mm
Column hardware pressure limit
5 bar (0.5 MPa)

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