

HiTrap Blue HP

Product Information

Cat#No# Hi-070P

Product Overview

HiTrap Blue HP is prepacked with Blue Sepharose High Performance for capture of a wide range of biomolecules, including: albumin, interferon, a broad range of nucleotide-dependent enzymes, α 2-macroglobulin, coagulation factors, and related proteins.

Description

HiTrap Blue HP is one of a range of prepacked columns for affinity chromatography. Fast, simple and easy separations are provided by the combination of a specially designed column and a high performance affinity medium. HiTrap Blue HP is particularly suitable for the isolation and purification of albumin, interferon, a broad range of nucleotide requiring enzymes, α 2 -macroglobulin, coagulation factors, and nucleic acid binding proteins. The removal of albumin is a particularly important application since excess amounts of albumin can disturb the results of several tests.

Characteristic

Fast and convenient use.

Prepacked with Blue Sepharose High Performance.

Simple operation with a syringe, a pump, an ÄKTA system, or other chromatography systems.

Maximum operating pressure

5 bar [0.5 MPa] (70 psi)

Sample preparation

The sample should be adjusted to the composition of the binding buffer. This can be done by either diluting the sample with binding buffer or by buffer exchange using HiTrap Desalting, PD-10 column or a HiPrep 26/10 Desalting column depending on the sample volume. The sample should be filtered through a 0.45 μ m filter or centrifuged immediately before it is applied to the column.

Matrix

Highly cross-linked, spherical agarose

HiTrap Blue HP

Average particle size

34 μ m

Ligand

Cibacron Blue F3G-A

Ligand density

4 mg/ml medium

Dynamic binding capacity

20 mg human albumin/ml medium

Recommended flow rate

< 4 ml/min

Recommended column height

25 mm

Chemical stability

All commonly used buffers, 70% ethanol, 8 M urea and 6 M guanidine hydrochloride.

pH working range

4 to 12

CIP stability

3 to 13

Temperature stability

4°C to room temperature

Storage

4 to 30°C, 20% Ethanol

Binding buffer

50 mM KH₂PO₄, pH 7.0 or 20 mM sodium phosphate, pH 7.0.

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Elution buffer

50 mM KH₂PO₄, 1.5 M KCl, pH 7.0 or 20 mM sodium phosphate, 2 M NaCl, pH 7.0.

Purification procedures

1. Fill the syringe or pump tubing with binding buffer. Remove the stopper and connect the column to the syringe (with the provided luer connector), or pump tubing, “drop to drop” to avoid introducing air into the column.
2. Remove the snap-off end at the column outlet.
3. Wash out the preservative and equilibrate the column with 5–10 column volumes of binding buffer.
4. Apply the sample at 0.5–1 ml/min or 2–5 ml/min for the HiTrap 1 ml or 5 ml column respectively, using a syringe fitted to the luer connector or by pumping it onto the column.
5. Wash with at least 5–10 column volumes of binding buffer or until no material appears in the effluent.
6. Elute with 5–10 column volumes of elution buffer.
7. The purified fractions can be desalting using HiTrap Desalting, PD-10 column or HiPrep 26/10 Desalting if necessary.

Pack size

5 × 1 mL

Maximum flow velocity

4 ml/min and 20 ml/min for 1 ml and 5 ml column respectively.

Dimensions

7 × 25 mm

Column volume

1 mL

Column i.d.

7 mm

Column hardware pressure limit

5 bar (70 psi, 0.5 MPa)