

HisTrap HP columns

Product Information

Cat#No# His-112P

Product Overview

HisTrap HP prepacked columns provide a fast, convenient and reproducible format for preparative purification of histidine-tagged (His-tag) recombinant proteins.

Characteristic

High resolution: due to small bead size (average bead size is 34 μm).

High binding capacity: at least 40 mg His tag protein per mL resin, for high yields.

Negligible nickel leakage: helps retain activity and minimize protein precipitation.

Broad reagent compatibility: suitable for use with a wide range of reducing agents, detergents, denaturants, and other additives. Convenient HiTrap format: 1 mL and 5 mL columns compatible with syringe, pump, or chromatography systems.

Maximum operating pressure

5 bar [0.5 MPa] (70 psi)

Metal ion capacity

~ 15 $\mu\text{mol Ni}^{2+}$ /ml medium

Matrix

Highly cross-linked spherical agarose, 6%

Average particle size

34 μm

Dynamic binding capacity

At least 40 mg (histidine)₆-tagged protein/ml medium.

Recommended flow rate

1 ml/min and 5 ml/min for 1 ml and 5 ml column, respectively.

Recommended column height

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25 mm

Chemical stability

0.01 M HCl, 0.1 M NaOH; tested for one week at 40°C. 1 M NaOH, 70% acetic acid; tested for 12 h. 2% SDS; tested for 1 h. 30% 2-propanol; tested for 30 min.

Chemical compatibility

Stable in all commonly used buffers, reducing agents, denaturants, and detergents.

pH working range

3 to 12

CIP stability

2 to 14

Storage

4 to 30°C, 20% Ethanol

Binding buffer

20 mM sodium phosphate, 0.5 M NaCl, 5 mM imidazole, pH 7.4.

Elution buffer

20 mM sodium phosphate, 0.5 M NaCl, 0.5 M imidazole, pH 7.4.

Cleaning-in-place

Ionically bound proteins: Wash with several column volumes of 1.5 M NaCl; then wash with approx. 10 column volumes of distilled water.

Precipitated proteins, hydrophobically bound proteins, and lipoproteins: Wash the column with 1 M NaOH, contact time usually 1 to 2 hours (12 hours or more for endotoxin removal). Then wash with approx. 10 column volumes of binding buffer, followed by 5 to 10 column volumes of distilled water.

Hydrophobically bound proteins, lipoproteins, and lipids: Wash with 5 to 10 column volumes of 30% iso-propanol for about 15 to 20 minutes. Then wash with approx. 10 column volumes of distilled water.

Alternatively, wash with 2 column volumes of detergent in a basic or acidic solution. Use, for example, 0.1 to 0.5% nonionic detergent in 0.1 M acetic acid, contact time 1 to 2 hours. After treatment, always remove

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residual detergent by washing with at least 5 column volumes of 70% ethanol¹ . Then wash with approx. 10 column volumes of distilled water.

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 (0.5 MPa)
