CREATIVE BIOMART®
Chromatography

HisTrap FF

Product Information

Cat#No#	His-110P

Product Overview

HisTrap FF is a ready-to-use column, prepacked with precharged Ni Sepharose 6 Fast Flow for preparative purification of histidine-tagged recombinant proteins by immobilized metal ion affinity chromatography (IMAC).

Description

Ni Sepharose 6 Fast Flow consists of 90 µm beads of highly cross-linked agarose, to which a chelating ligand has been immobilized. This chelating ligand is charged with Ni2+ ions, the first-choice metal ion for purifying most histidine-tagged proteins. The negligible leakage of Ni2+ ions from the matrix ensures reliable capture of histidine-tagged proteins in repeated IMAC purifications.

Characteristic

High binding capacity, approx. 40 mg/mL resin.
Negligible leakage of Ni2+.
Prepacked columns offer reliable and convenient time-saving purification of histidinetagged recombinant proteins.
Compatible with a wide range of reducing agents, detergents, denaturants, and other additives.

Maximum operating pressure

5 bar [0.5 MPa] (70 psi)

Metal ion capacity

~ 15 µmol Ni2+ /ml medium

Matrix

Highly cross-linked spherical agarose, 6%

Average particle size

90 µm

Dynamic binding capacity

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Approx. 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
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
2 to 14
CIP stability
3 to 12
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

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

Pack size
5 × 5 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)

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