

HisTrap FF Crude columns

Product Information

Cat#No# His-111P

Product Overview

HisTrap FF Crude columns are high binding capacity IMAC columns for his-tagged protein purification when scalability is needed.

Characteristic

High binding capacity – binds up to 40 mg his-tag protein/mL resin.

Excellent flow properties – great performance even at high flow rates.

Optimized for unclarified samples – short purification time can minimize potential negative effects, such as degradation and oxidation of proteins.

HiTrap column format – compatible with syringe, pump, or chromatography system such as ÄKTA systems or other FPLC systems.

Applications

Intended for research use only, and shall not be used in any clinical or in vitro procedures for diagnostic purposes.

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

Approx. 40 mg histidine-tagged protein/ml medium.

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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, 500 mM NaCl, 5 mM imidazole, pH 7.4.

Elution buffer

20 mM sodium phosphate, 500 mM NaCl, 500 mM 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 h (12 h 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.

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Hydrophobically bound proteins, lipoproteins, and lipids: Wash with 5 to 10 column volumes of 30% isopropanol for about 15 to 20 min. 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 h. After treatment, always remove 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)
