

## 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 Ni<sup>2+</sup> /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.

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**Recommended column height**

25 mm

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**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.

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**Chemical compatibility**

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

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**pH working range**

2 to 14

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**CIP stability**

3 to 12

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**Storage**

4 to 30°C, 20% Ethanol

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**Binding buffer**

20 mM sodium phosphate, 500 mM NaCl, 5 mM imidazole, pH 7.4.

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**Elution buffer**

20 mM sodium phosphate, 500 mM NaCl, 500 mM imidazole, pH 7.4.

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**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% ethanol<sup>1</sup>. Then wash with approx. 10 column volumes of distilled water.

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**Pack size**

5 × 1 mL

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**Maximum flow velocity**

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

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**Dimensions**

7 × 25 mm

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**Column volume**

1 ml

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**Column i.d.**

7 mm

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**Column hardware pressure limit**

5 bar (0.5 MPa)

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