



PreCap Heparin

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1. Product Description

Heparin Beads 6FF is an affinity medium for purification of heparin-dependent biomolecules, including antithrombin III, coagulation factors and other plasma proteins, DNA binding proteins, lipoproteins, protein synthesis factors, enzymes that act on nucleic acids, and steroid receptors. The base matrix of **Heparin Beads 6FF** is highly cross-linked 6% agarose. The excellent flow characteristics and high chemical stability of **Heparin Beads 6FF** make the medium highly suitable for process-scale purifications.

PreCap Heparin is one of a range of prepacked, ready-to-use columns for affinity chromatography. It is packed with 1 ml and 5 ml of **Heparin Beads 6FF**. Five different packing sizes are available. **PreCap Heparin** has the standard interface and can be adapted to all kinds of chromatography system, such as ÄKTA. It is fast, simple and easy operation.

Table 1. Characteristics of **PreCap Heparin**

Item	Description	
	1 ml	5 ml
Size		
Column size	0.7×2.5 cm	1.6×2.5 cm
Matrix	Highly cross-linked 6% agarose	
Ligand	Heparin sodium	
Ligand density	>4 mg/ml medium	
Particle size (µm)	45-165	
Maxi pressure	0.3 MPa, 3 bar	
pH stability	3-12	
Storage buffer	1×PBS containing 20% ethanol	
Storage	2-8℃	

2. Purification Procedure

2.1 Buffer Preparation

Water and chemicals used for buffer preparation should be high purity. It is recommended filtering the buffers by passing them through a 0.22 µm or 0.45 µm filter before use.

Binding Buffer /Wash Buffer: 50 mM Tris-HCl, 10 mM sodium citrate, pH 7.4

Elution Buffer: 50 mM Tris-HCl, 10 mM sodium citrate, 1 M NaCl, pH 7.4

2.2 Sample Preparation

It is recommended filtering the sample solution by passing them through a 0.22 µm or 0.45 µm filter before use.

2.3 Column Purification

PreCap Heparin is a prepacked, ready to use column. The prepacked column provides fast, simple and easy separations in a convenient format.

- 1) Fill the syringe or pump tubing with binding buffer. Remove the stopper and connect the column to the syringe (with the provided connector), or pump tubing, "drop to drop" to avoid introducing air into the column. Remove the snap-off end at the column outlet.
- 2) Wash the column with 10 column volumes.
- 3) Apply the sample, using a syringe fitted to the connector or by pumping it onto the column.
- 4) Wash with 5 to 10 column volumes of binding buffer or until no material appears in the effluent.
- 5) Elute with 5 column volumes of elution buffer. Other volumes may be required if the interaction is difficult to break.





2.4 Analysis

Identify the fractions containing the target protein. Use UV absorbance, SDS-PAGE, or western blot.

3. Cleaning-In-Place

In general, **PreCap Heparin** is well suited for reuse a number of times. When precipitation and protein aggregation cause the loss of velocity and combined loads, you need to clean the medium.

Remove the precipitation or denatured protein

Wash the column with 2 column volumes 0.1M NaOH or 6M guanidine hydrochloride solution. Finally wash the column with 5 column volumes 1×PBS (pH 7.4).

Remove the non-specific adsorption protein

Wash the column with 3 column volumes 70% ethanol or 1% Triton X-100.Finally wash the column with 5 column volumes 1×PBS (pH 7.4).

4. Related Products

Product	Cat. No.	Size
Heparin Beads 6FF	SA024005	5ml
	SA024025	25 ml
	SA024100	100ml
	SA024500	500ml
	SA02401L	1 L
	SA02410L	10 L
PreCap Heparin	SA024C11	1×1 ml
	SA024C51	5×1 ml
	SA024C15	1×5 ml
	SA024C55	5×5 ml
	SA024CS	3×1 ml+1×5 ml

