PreCap Streptavidin

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1. Product Description

Recombinant streptavidin isolated from Streptomyces avidinii is immobilized on high-crossed linked 6% agarose beads. **Streptavidin Beads 6FF** can be used to bind biotin and biotinylated substances. The interaction between streptavidin and biotin is very strong and requires denaturating conditions for elution, which may destroy both the ligand and the sample. The interaction between 2-iminobiotin and streptavidin is weak, it can be eluted at pH4.0, which preserve the biomolecules activity.

The crosslinking of the base matrix has been optimized to give the matrix good flow properties and high physical and chemical stability, both of which are key factors for cost-effective, large-scale use.

PreCap Streptavidin is a prepacked ready to use column. **PreCap Streptavidin** 1ml and 5ml columns are packed with 1ml and 5ml of **Streptavidin Beads 6FF**. **PreCap Streptavidin** can be adapted to all kinds of chromatography system, such as ÄKTA. It is easy to operate.

Table 1. Characteristics of **Streptavidin Beads 6FF**

Item	Description
Matrix	Highly cross-linked 6% agarose
Ligand	Streptavidin
Capacity (/ml medium)	>200nmol Biotin/ml medium
Particle size (μm)	45-165
Maxi pressure	0.3 MPa, 3 bar
pH stability	2-10
Storage buffer	1×PBS containing 20% ethanol
Storage	2°C - 8°C

2. Purification Procedure

2.1 Buffer Preparation

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

Binding of biotin or biotinylated substances

Binding Buffer: 20mM NaH_2PO_4, 0.15M NaCl, pH7.4

Elution Buffer: 8MGuanidine-HCl, pH1.5

Note: The harsh elution condition may affect the activities of the sample and the ligand. Streptavidin Beads 6FF cannot be re-used after elution under these conditions.

Purification of iminobiotinylated subatances

Binding Buffer: 50mM ammonium carbonate, 0.5M NaCl, pH10.0

Elution Buffer: 50mM ammonium acetate, 0.5M NaCl, pH4.0

2.2 Sample preparation

The sample should be adjusted to the composition of the binding buffer. This can be done either by diluting the sample with binding buffer or by buffer exchange. The sample should be filtered through a 0.22um or 0.45 μm filter or centrifuged before use

2.3 Sample Purification

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 of binding buffer.

3) Load the sample by using a syringe fitted to the connector or by pumping it onto the column.

4) Wash the column 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. Related Products

Product	Cat. No.	Size
Streptavidin Beads 6FF	SA021005	5 ml
	SA021025	25 ml
	SA021100	100 ml
	SA021500	500 ml
	SA02101L	1 L
	SA02110L	10 L
PreCap Streptavidin	SA021C11	1×1 ml
	SA021C51	5×1 ml
	SA021C15	1×5 ml
	SA021C55	5×5 ml
	SA021CS	3×1 ml+1×5 ml