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HiSelect Streptavidin 6FF

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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.

HiSelect Streptavidin 6FF is a prepacked ready to use column. It is packed with 4.7 ml **StreptavidinBeads 6FF**.The arrow on column label indicates the recommended flow direction. It can be adapted to all kinds of chromatography system, such as ÄKTA.

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

Item	Description
Size	4.7 ml
Column size	0.77×10 cm
Matrix Spherical	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 Solution	1X PBS containing 20% ethanol
Storage Temperature	2-8℃

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

HiSelect Streptavidin 6FF is a prepacked, ready to use column for purification. The prepacked column provides fast, simple and easy separations in a convenient format.

1) Fill the syringe or pump tubing with distilled water. 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 stopper at the column outlet and connect the column to the chromatographic system.

2) Wash the column with 3-5 column volumes of distilled water.

3) Equilibrate the column with at least 5 column volumes Lysis Buffer.

4) Apply the pre-treated sample, using a Loop fitted to the connector or by pumping it onto the column.

5) Wash with Wash Buffer until the absorbance reaches the baseline or no material appears in the effluent (Generally at least 10-15 column volumes).

6) Elute with elution buffer . For one-step elution, 5 column volumes are usually enough.

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
HiSelect Streptavidin 6FF	SA021C47	4.7 ml
HiPur Streptavidin 6FF	SA021C20	20 ml