Streptavidin ST Magarose Beads

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1. Product Description

Magarose Beads have superparamagnetism and rapid magnetic responsiveness. Peptides, proteins, antibodies, oligomeric nucleotide biological ligands can be coupled to the surface of microspheres. **Magarose Beads** is an important carrier of the medical and molecular biology research tools.

Streptavidin ST Magarose Beads is a chromatography medium for one-step purifying Strep-tag II fusion proteins from various of expression system. The Strep-Tag II peptide is an eight amino acid fusion tag(Trp-Ser-His-Pro-Gln- Phe-Glu-Lys), which has negligible effects on recombinant proteins. The further improved Twin Strep-tag II is a sequence of two Strep-tag II sequences in a sequential order (linked by internal amino acids), and this tag is capable of gentle and rapid purification like Strep-tag II. Streptavidin ST is one of the most stable proteins, which is coupled to Magarose Beads, allowing the fusion protein to be purified under physiological conditions, ensuring the bioactivity of the protein.

Table 1. Characteristics of **Streptavidin ST Magarose Beads**

Item	Description
Matrix	Magnetic agarose
Ligand	Streptavidin ST
Particle Size (μm)	30-100
Magnetic beads volume	20%(V/V) slurry
Storage Buffer	1XPBS 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 0.22 μm or 0.45 μm filter before use.

Binding/Wash buffer: 100 mM Tris-HCl, 150 mM NaCl, 1mM EDTA, pH 8.0 or PBS

Elution Buffer: 2.5mM desthiobiotin in binding buffer

Regeneration Buffer: 1mM HABA in binding buffer

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

2.3 Purification

2.3.1 Preparation of the Magnetic Beads

1) Completely resuspend the beads by shaking or vortexing the vial.

2) Transfer appropriate amount **Streptavidin ST Magarose Beads**(20% v/v) into a clean tube.

3) Place the tube on a magnetic separation rack to collect the beads. Remove and discard the supernatant.

4) Add Binding/Wash Buffer to the tube and invert the tube several times to mix. Use the magnetic separation rack to collect the beads and discard the supernatant. Repeat this step twice.

2.3.2 Sample Purification

1) Add the sample solution to the magnetic bead pretreated in Step 2.3.1, swirl and mix evenly. Place the sample on a rotator at room temperature. After about 30min, Use the magnetic separation rack to collect the beads and discard the supernatant.

2)Add 5 column volumes Wash Buffer to the centrifuge tube,swirl and mix evenly, and place the centrifuge tube on the magnetic separation rack for 1minute to collect the beads. Remove and discard the supernatant. Repeat the washing for 2 times.
3)Elution: Add 300μl elution buffer into the centrifuge tube, blow it with a pipette 5 times, and then place the centrifuge tube in a turning mixer at room temperature or gently turn it manually. 5-10 min later, place it on a magnetic separator for about 1 min. After the solution is clarified, the collected elution components are the target proteins. Repeat the operation 2-3 more times to collect elution components separately and leave them for testing.

2.5 Analysis

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

3. Regeneration

Regeneration: Wash the column with 3CV distilled water followed by 15CV regeneration buffer and 30CV binding buffer.The HABA is washed away with the binding buffer.When the flow through has no color, it means that no HABA remains on the beads, and it can be reused.
Equilibration:Before next use, balance with 5 times column volume of binding buffer.

4. Related Products

Product	Cat. No	Size
Streptavidin ST Magarose Beads	SM010005	5 ml
	SM010010	10 ml
	SM010025	25 ml
	SM010100	100 ml
	SM01001L	1 L