

Streptavidin Magnetic Beads

Product No. 544050 (2 mL), 544051 (5 mL)



1. General Description

The Abraxis' superparamagnetic nanoparticles are coupled with a biomolecule, such as Streptavidin, and are utilized in the magnetic separation and isolation of biotin-labeled components. The magnetic beads have a large surface area with high capture efficiencies.

2. Storage Buffer

Reagent is stored in tris buffered saline pH 7.4 with preservatives.

3. Storage and Stability

The Streptavidin Magnetic Beads should be stored in the refrigerator (4-8°C). The reagent must be allowed to reach room temperature (20-25°C) before use and may be used until the expiration date on the box. Do not freeze, dry, or centrifuge the magnetic beads as they may result in loss of binding activity and aggregation.

4. Test Principle

Streptavidin magnetic beads are incubated with the biotin-labeled solution and then separated by magnets. After the unbound particulates are washed from the beads, the bound biotin are eluted from the beads using the elution buffer. The beads are then magnetically separated from the eluted solution, which is removed manually.

5. Warning and Precautions

-Do not freeze the reagent.

-Prior to use, ensure that the product has not expired by verifying that the date of use is prior to the expiration date on the label.

-Ensure that reagent bottle caps are tight after each use to prevent drying of reagents.

-Mistakes in handling the test can also cause errors. Possible sources for such errors can be:

Inadequate storage conditions of the test kit (or reagents), incorrect pipetting sequence or inaccurate volumes of the reagents, too long or too short incubation times, and/or short magnetic separation times.

6. Characteristics

Bead mean diameter: ~0.5 μm

Bead concentration: 5 mg/mL

Binding capacity: ≥ 60 μg biotin-IgG /mg of beads

7. Protein Isolation

A. Materials Provided

1. Streptavidin magnetic beads, 5 mg/mL

B. Additional Materials (not provided with the kit)

1. Binding/Wash Buffer: TBS - 0.05% Tween 20 detergent
2. Elution Buffer: 0.1 M Glycine pH 2.0, 5 mL
3. Neutralization Buffer: 1M Tris pH 8.0, 1 mL
4. Micro-pipettes with disposable plastic tips (10-200 and 200-1000 μ L)
5. 1.5 mL or 2.0 mL Eppendorf or microcentrifuge vials
6. Timer
7. Rotator
8. Distilled or deionized water
9. Vortex mixer
10. Solo or Multi-6 Microcentrifuge Separator (PN 472270; PN 472260)

C. Procedures

1. Add 100 μ L (0.5 mg) of beads to 1 mL of binding buffer in each tube to wash beads.
2. Magnetically separate using a magnetic separator for 2 minutes or when the supernatant is clear.
3. Remove the supernatant and wash once more by adding 1 mL of binding buffer.
4. Repeat step 2 and remove the supernatant.
5. Resuspend beads by adding 450 μ L of binding buffer.
6. Add 50 μ L of serum or cell culture supernatant to the particles.

Note: Sample volume can be modified according to user preference. If the sample volume is < 500 μ L, dilute it to a final volume of 500 μ L with Binding/Wash Buffer.

7. Gently mix using vortex or rotator for 30 minutes.
8. Magnetically separate using a magnetic separator for 2 minutes or when the supernatant is clear.
9. Remove supernatant and wash with 0.5 mL Binding/Wash buffer to remove unbound proteins.
10. Repeat steps 8 and 9 once more. Remove supernatant.
11. Add 100 μ L of elution buffer to beads and mix well.
12. Incubate at room temperature for 10 minutes with occasional gentle mixing or vortex.
13. Separate for 2 minutes and remove the eluent to a new tube containing 15 μ L of neutralization buffer.

Ordering Information

Description	Size (mL)	Part Number
Biotin Magnetic Beads	2, 5	544000/01
Streptavidin Beads	2, 5	544050/51
Multi-6 Microcentrifuge Separator		472260
Solo Tube Separator		472270
15/50 mL Tube Separator		472250
Multi Purpose Magnetic Separator (15/50/microcentrifuge)		472280

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