

Streptavidin Agarose Beads

Product Information

Cat. No.: KTSM1347
Volume: 500 μ L (50% streptavidin conjugated agarose beads)
Storage: 4°C (DO NOT freeze)
Shelf life: 12 months

Product Property

Beads size: 45-165 μ m (4% cross-linked Magarose beads)
Storage buffer: 1xPBS pH7.4, 25% glycerol, 0.02% sodium azide
Ligand: Streptavidin (fused with 6 \times His tag)
Binding capacity: 10 μ L slurry bind 15-20 μ g of biotinylated protein
Specificity: Biotinylated antibodies, nucleic acids, proteins and other ligands

Application

IP, Co-IP, CHIP, RIP, Enzyme Activity Detection etc.

Product Description

The streptavidin-biotin system exhibits extremely high affinity ($K_D=10^{-15}$) and is widely used in biological research. Streptavidin Agarose Beads can efficiently bind biotinylated ligands including antibodies, nucleic acids, and proteins.

Suggested Buffer for IP

Buffer	Composition
Buffer 1 (for biotinylated nucleic acids)	10 mM Tris-HCl pH 7.5, 1 mM EDTA, 1 M NaCl, 0.01% - 0.1% Tween-20
Buffer 2 (for biotinylated proteins)	PBS pH 7.4, 0.05% Tween-20; 0.01% - 0.2% BSA may be added as needed

Protocol

➤ Binding of Biotinylated Nucleic Acids

a) Resuspend beads thoroughly. Pipette 100 μ L bead suspension into a new centrifuge tube. Centrifuge at 1200 \times g for 3 min at 4°C. Carefully remove the supernatant storage buffer.

Note: Adjust bead volume as needed. Recommended input of biotinylated molecules: 1 - 2 \times bead capacity for full saturation.

b) Add 1 mL Buffer 1, resuspend beads completely, centrifuge at 1200 \times g for 3 min at 4°C, and discard

supernatant.

Note: If bead volume >1 mL in step 1, add an equal volume of Buffer 1.

- c) Repeat step 2 once.
- d) Add 500 μ L biotinylated nucleic acid diluted in Buffer 1, resuspend beads thoroughly. Rotate and mix on a rotator for 30 min at 4°C.
- e) Centrifuge at 1200 \times g for 3 min at 4°C. Transfer supernatant to a new tube.
- f) Wash beads 3 times using the method in step 2.
- g) Resuspend beads in an appropriate low-salt buffer for downstream experiments.
- h) The amount of nucleic acid bound can be calculated as: (concentration before reaction - concentration after reaction) \times reaction volume.

➤ **Binding of Biotinylated Proteins**

- a) Resuspend beads thoroughly. Pipette 100 μ L bead suspension into a new centrifuge tube. Centrifuge at 1200 \times g for 3 min at 4°C. Carefully remove the supernatant storage buffer.

Note: Adjust bead volume as needed. Recommended input of biotinylated molecules: 1 - 2 \times bead capacity for full saturation.

- b) Add 1 mL Buffer 2, centrifuge at 1200 \times g for 3 min at 4°C, and discard supernatant.
Note: If bead volume >1 mL in step 1, add an equal volume of Buffer 2.
- c) Repeat step 2 twice (total 3 washes).
- d) Add 500 μ L - 1 mL biotinylated protein diluted in Buffer 2, resuspend beads thoroughly. Rotate and mix on a rotator for 30 min at room temperature.
- e) Centrifuge at 1200 \times g for 3 min at 4°C. Transfer supernatant to a new tube.
- f) Wash beads 3 - 5 times using the method in step 2.
- g) Resuspend beads in Buffer 2 or other suitable buffer for downstream experiments.

➤ **Notes**

- a) DO NOT freeze the beads.
- b) Use low-binding pipette tips and centrifuge tubes to avoid loss due to adhesion.
- c) Mix gently and thoroughly before pipetting beads from storage; avoid foaming.
- d) For dissociation of biotin from streptavidin agarose beads:
- e) Method 1: Add buffer containing 0.1% SDS, boil for 5 min.
- f) Method 2: Add 10 mM EDTA pH 8.2 with 95% formamide, incubate at 65°C for 5 min or 90°C for 2 min.

This product is only for research use.