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Streptavidin Magarose Beads

Product Information

Cat. No.: KTSM1348

Volume: 500 μL (50% streptavidin conjugated magarose beads)

Storage: 4°C (DO NOT freeze)

Shelf life: 12 months

Product Property

Beads size: 30 – 100 μm (magnetic agarose beads)

Storage buffer: 1xPBS pH7.4, 25% glycerol, 0.02% sodium azide

Ligand: Streptavidin (fused with 6×His tag)

Binding capacity: 10 μL slurry bind 15-20 μg 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 (KD=10^-15) and is widely used in biological research. Streptavidin Magarose 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 μL bead suspension into a new centrifuge tube. Place the tube on a magnetic separator for 1 min (magnetic separation). Carefully remove the supernatant storage buffer.

Note: Adjust bead volume as needed. Recommended input of biotinylated molecules: 1 – 2× bead capacity for full saturation.

b) Add 1 mL Buffer 1, resuspend beads completely, perform magnetic separation, 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 µL 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×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) × reaction volume.

- **Binding of Biotinylated Proteins**

a) Resuspend beads thoroughly. Pipette 100 µL bead suspension into a new centrifuge tube. Place the tube on a magnetic separator for 1 min (magnetic separation). Carefully remove the supernatant storage buffer.

Note: Adjust bead volume as needed. Recommended input of biotinylated molecules: 1 – 2× bead capacity for full saturation.

b) Add 1 mL Buffer 2, perform magnetic separation, 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 µL – 1 mL biotinylated protein diluted in Buffer 2, resuspend beads thoroughly. Rotate and mix on a rotator for 30 min at room temperature.

e) Perform magnetic separation. 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.