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Chitin (CBD-tag Affinity) Magnetic Beads

Catalogue number: ABA-06001 ABA-06002 ABA-06003

【Introduction】

AvanBio Chitin Magnetic Beads are nano-superparamagnetic beads covalently coupled with chitin. With a fast magnetic response rate, high protein binding capacity and low non-specific binding, AvanBio Chitin Magnetic Beads provide a rapid and efficient method to purify CBD(chitin-binding domain)-fusion proteins from cell culture supernatant. The beads are simply added to cell culture supernatant and CBD-fusion proteins will bind to the beads. After washing unbound proteins off, the CBD-fusion proteins can be eluted from the magnetic beads or the protein-bound magnetic beads can be directly used in downstream experiments (e.g. capturing target proteins, which bind to the immobilized CBD-fusion proteins, from crude cell lysates). The process can be completed manually or fully automated for high throughput applications.

【Product Specifications】

Diameter： 500nm
pH stability： pH 3-13
30 min sedimentation rate： <0.1%
Magnetic response rate: >30emu/g
Solvent： 20% ethanol
Binding capacity: 60-100μg CBD-fusion proteins per mg magnetic beads

【Product Content】

Catalogue Number	Conc. (mg/ml)	Volume (ml)	Amount of Beads (mg)
ABA-06001	50	1	50
ABA-06002	50	4	200
ABA-06003	50	20	1000

【Purification Protocol】

The following protocol provides general guidelines for purification of CBD-fusion proteins using AvanBio Chitin Magnetic Beads and may be modified by the user for specific applications. The protocol is scalable.

A. Additional materials recommended:

1. Binding/Washing Buffer: 20mM Tris-HCl，0.5M NaCl，1mM EDTA, 0.1% Tween-20, pH 8.0
2. A magnetic stand or a 96-well magnetic bead automation processor

B. Isolation of CBD-fusion proteins:

1. Gently mix the magnetic beads thoroughly before use by repeated inversion.
2. Place 20μl of magnetic beads (1mg) into a 1.5ml sterile microcentrifuge tube.
3. Place the tube on a magnetic stand, collect the beads and discard the supernatant.
4. Wash the beads twice with Binding/Washing Buffer (500μl each time) by magnetic separation. Collect the beads and discard the supernatant.
5. Add 200-500μl of cell culture supernatant to the beads; mix thoroughly and incubate for 1 hr at 4°C on a rotator.

6. Collect the beads with a magnet and save the supernatant for analysis if desired.
7. Wash the protein-coupled beads three times with Binding/Washing Buffer (500µl each time) by magnetic separation.
8. The CBD-fusion proteins can be eluted from the magnetic beads (e.g. boiling in 30µl of SDS-PAGE reducing sample buffer for 5 min); or the protein-bound magnetic beads can be directly used in downstream experiments (e.g. capturing target proteins, which bind to the immobilized CBD-fusion proteins, from crude cell lysates).

【Storage】

Stored at 2-8 °C, 2 years