

【Product Content】

Amylose (MBP-tag Affinity) Magnetic Beads

Catalogue number: ABA-05001 ABA-05002 ABA-05003

【Introduction】

AvanBio Amylose Magnetic Beads are nano-superparamagnetic beads covalently coupled with amylose. With a fast magnetic response rate, high protein binding capacity and low non-specific binding, AvanBio Amylose Magnetic Beads provide a rapid and efficient method to purify MBP (maltose binding protein)-fusion proteins from cell culture supernatant. The beads are simply added to cell culture supernatant and MBP-fusion proteins will bind to the beads. After washing unbound proteins off, the MBP-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 MBP-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: 10-100µg MBP-fusion proteins per mg magnetic beads

Catalogue Number	Conc. (mg/ml)	Volume (ml)	Amount of Beads (mg)
ABA-05001	50	1	50
ABA-05002	50	4	200
ABA-05003	50	20	1000

【Purification Protocol】

The following protocol provides general guidelines for purification of MBP-fusion proteins using AvanBio Amylose 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, 0.2M NaCl, 1mM EDTA, 1mM DTT, pH 7.4
2. Elution Buffer: 10mM maltose in Binding/Washing Buffer
3. A magnetic stand or a 96-well magnetic bead automation processor

B. Isolation of MBP-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-bound beads three times with Binding/Washing Buffer (500µl each time) by magnetic separation.
8. The protein-bound magnetic beads can be directly used in downstream experiments (e.g. capturing target proteins, which bind to the immobilized MBP-fusion proteins, from crude cell lysates).

Or the MBP-fusion proteins can be eluted from the magnetic beads. Suspend the beads in 50µl of Elution Buffer, incubate for 10 min at 4°C on a rotator. Apply magnet and transfer the supernatant to a clean microcentrifuge tube. Repeat this step once if desired. Combine the eluates from multiple elutions. The purified protein is ready for use.

【Storage】

Stored at 2-8 °C, 2 years