

Myc Nanobody Agarose Beads

(MNA001)

Product Overview

Myc Nanobody Agarose Beads are prepared by conjugating anti-Myc-tag nanobodies to agarose beads, which can specifically bind Myc-tagged fusion proteins. Without the light and heavy chains of conventional antibodies, this product achieves a dissociation constant at the nM–pM level. 20 µL of the bead suspension can bind 10–15 µg of Myc-tagged fusion proteins. It features high specificity, clean background, high affinity, high binding capacity, and ease of use, suitable for immunoprecipitation (IP)/co-immunoprecipitation (CoIP), chromatin immunoprecipitation (ChIP)/RNA-binding protein immunoprecipitation (RIP), enzyme activity assays, mass spectrometry analysis, and other experiments.

Components

Product Name	Cat. No.	Volume
Myc Nanobody Agarose Beads	MNA001-01	500 µL
	MNA001-02	1 mL

Storage Conditions

Stable for 1 year at 4°C, and 2 years at -20°C. Shipped with ice packs.

Precautions

1. For your safety, please wear a lab coat and disposable gloves. This product is for **research use only**.
2. For long-term storage, store at -20°C. Avoid centrifugation, drying, and repeated freeze-thaw cycles.
3. The storage buffer is PBS containing 20% ethanol and 0.03% NaN₃.

Experimental Protocol

1. Cell Collection:

Approximately 10⁶–10⁷ cells expressing Myc-tagged fusion proteins are used per immunoprecipitation reaction; adjust the cell number according to the expression level of the Myc-tagged fusion protein. Aspirate the medium, wash the dish twice with pre-chilled 1×PBS, harvest adherent cells using a cell scraper or trypsinization, transfer cells to a centrifuge tube, centrifuge at 500 g for 3 min, and discard the supernatant.

2. Cell Lysis:

- 1) Add protease inhibitors to the lysis buffer, and resuspend cells in 1.0 mL pre-chilled lysis buffer. For membrane proteins or nuclear/chromatin proteins, RIPA lysis buffer or standard IP lysis buffer combined with sonication can be used.

- 2) Incubate on ice for 30 min, mixing thoroughly every 10 min or lysing on a rotary mixer at 4°C.
- 3) Centrifuge at 20,000 g for 15 min at 4°C, transfer the lysate (supernatant) to a new pre-chilled tube, and discard the pellet.

Note: The cell lysate can be stored long-term at -80°C.

3. **Bead Equilibration (Optional):** Mix Myc Nanobody Agarose Beads thoroughly, transfer 20 µL of the product to 500 µL pre-chilled lysis buffer, separate the beads on a magnetic stand until the supernatant is clear, and discard the supernatant (tip: cut off the tip of the pipette tip when aspirating 20 µL of the bead suspension).

4. Protein Binding:

- 1) Add the cell lysate to the equilibrated Myc Nanobody Agarose Beads (if Step 3 is omitted, add 20 µL of the product directly to the cell lysate). Incubate on a rotary mixer at 4°C for 1–3 h. If needed, save 50 µL of the lysate as input for Western blot analysis.
- 2) Centrifuge at 2500 g for 3 min at 4°C and discard the supernatant.

5. Bead Washing: Resuspend the Myc Nanobody Agarose Beads in 1.0 mL pre-chilled lysis buffer, wash on a rotary mixer at 4°C for 5 min, centrifuge at 2500 g for 3 min at 4°C, discard the supernatant, and repeat washing twice.

6. Protein Elution (Choose method based on downstream application):

- 1) **SDS-PAGE Sample Buffer Elution:** Resuspend the beads in 20–50 µL 2×SDS-sample buffer. Heat at 95°C for 10 min for full denaturation to release the immunoprecipitated complexes from the beads, then centrifuge at 2500 g for 3 min at 4°C and collect the supernatant. The collected product can be used for SDS-PAGE and Western blot analysis.
- 2) **Acidic Elution:** Add 50 µL of 0.2 M glycine (pH 2.5) to elute the bound proteins, incubate for 30 s with constant mixing, centrifuge, transfer the supernatant to a new centrifuge tube, and immediately add 5 µL of 1.0 M Tris (pH 10.4) to neutralize the acidic glycine.

Note: Repeat this step to improve elution efficiency.

- 3) **Myc-tagged Protein Elution:** Add excess Myc-peptide for elution.