

antibodies^{-online™}

ABIN5311504

MBP-Catcher

High-affinity anti-MBP

Single-Domain Antibody (sdAb)

Protocol

For research use only

Not for use in clinical diagnostic procedures

Version Mar 2024

Catcher Product Line

GFP-Catcher - ABIN5311508

GFP-Catcher - ABIN7272855 Magnetic Beads

RFP-Catcher - ABIN5311510

RFP-Catcher - ABIN7529450 Magnetic Beads

BFP-Catcher - ABIN5311512

GST-Catcher - ABIN5311506

MBP-Catcher - ABIN7272855

mNeonGreen-Catcher - ABIN7529451

Step-by-step Protocol

I. Cell Collection & Lysis

1. For mammalian cells, harvest 10^6 - 10^8 cells per sample.
2. Lyse cells according to established protocols in 0.2 to 1.5 mL volume.

Buffer recommendations:

2% Triton X-100, 1% Tween-20, 1% NP-40, 1% CHAPS, 1% Deoxycholate, 0.1% SDS

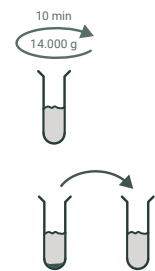
4 M NaCl, 2 M KCl, 1 M MgCl₂, 100 mM EDTA

4 M urea

10 mM DTT, 10 mM 2-Mercaptoethanol

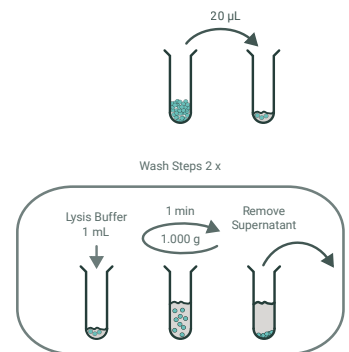
RNAse A, DNAse I, Benzamide, protease inhibitors

3. Centrifuge cell lysates in microcentrifuge tubes for 10 min at 14,000 x g
4. Transfer the supernatant to a fresh microcentrifuge tube for each sample and keep at 4 °C.



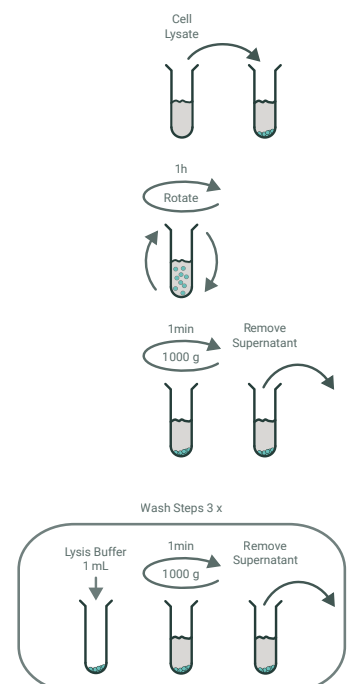
II. Bead Preparation for MBP Capture

5. Homogenize the MBP-Catcher (agarose beads) slurry gently by shaking.
6. Transfer 20 µL bead slurry to a 1.5 mL microcentrifuge tube for each sample.
7. Add 1 mL Lysis Buffer to equilibrate MBP-Catcher (agarose beads).
8. Centrifuge MBP-Catcher (agarose beads) for 1 min at 1000 x g and carefully remove the supernatant.
9. Repeat wash steps once for a total of two washes.



III. Bead Incubation with Supernatant

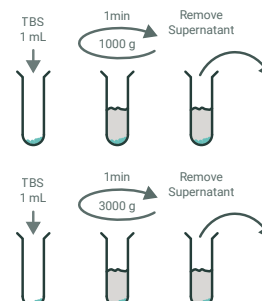
10. Resuspend equilibrated MBP-Catcher (agarose beads) gently with the cell lysate supernatant.
11. Rotate the microcentrifuge tubes for 1 h at 4 °C.
12. Centrifuge microcentrifuge tubes for 1 min at 1000 x g at 4 °C. Keep a small sample as "unbound" fraction. Carefully remove the supernatant.
13. Resuspend MBP-Catcher (agarose beads) in 1 mL Lysis Buffer.
14. Centrifuge MBP-Catcher (agarose beads) for 1 min at 1000 x g and carefully remove the supernatant.
15. Repeat wash steps twice for a total of three washes.



Step-by-step Protocol

IV. Bead Washing and Solution Changes

16. Resuspend MBP-Catcher (agarose beads) gently in 1 mL TBS.
17. Centrifuge MBP-Catcher (agarose beads) for 1 min at 1000 x g and carefully remove the supernatant.
18. Resuspend MBP-Catcher (agarose beads) gently in 1 mL TBS.
19. Centrifuge MBP-Catcher (agarose beads) for 1 min at 3000 x g and carefully remove the supernatant.



V. Elution Preparation

20. Resuspend MBP-Catcher (agarose beads) resin in 50 µL 2X SDS sample buffer.
21. Heat sample (agarose beads) resin for 5 min to 95 °C.
22. Centrifuge microcentrifuge tubes for 1 min at 3000 x g and transfer the supernatant to fresh microcentrifuge tubes. Keep the pellet (agarose beads) as backup.



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