

Protocol for ABIN7529451

## mNeonGreen-Catcher High-affinity anti-mNeonGreen Single-Domain Antibody (sdAb)

### Step-by-Step Protocol

#### Cell Collection & Lysis

- For mammalian cells, harvest  $10^6$ - $10^8$  cells per sample.
- 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  $MgCl_2$ , 100 mM EDTA
  - 4 M urea
  - 10 mM DTT, 10 mM 2-Mercaptoethanol
  - RNAse A, DNase I, Benzonase, protease inhibitors
- Centrifuge cell lysates in microcentrifuge tubes for 10 minutes at 14000 x g at 4°C. Keep a small samples as "input" fraction.
- Transfer the supernatant to a fresh microcentrifuge tube for each sample and keep at 4°C.

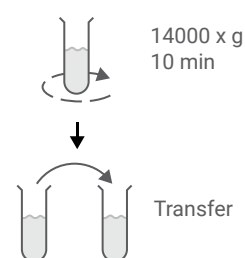
#### Bead Preparation for mNeonGreen Capture

- Homogenize the mNeonGreen-Catcher (agarose beads) slurry gently by shaking.
- Transfer 20  $\mu$ L bead slurry to a 1.5 mL microcentrifuge tube for each sample.
- Add 1 mL Lysis Buffer to equilibrate mNeonGreen-Catcher (agarose beads).
- Centrifuge mNeonGreen-Catcher (agarose beads) for 1 minute at 1000 x g and carefully remove the supernatant.
- Repeat wash steps once for a total of 2 washes.

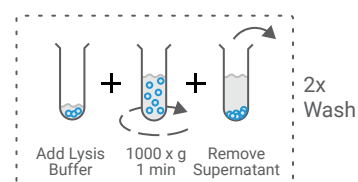
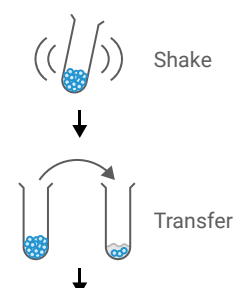
#### Bead Incubation with Supernatant

- Resuspend equilibrated mNeonGreen-Catcher (agarose beads) gently with the cell lysate supernatant.
- Rotate the microcentrifuge tubes for 1 hour at 4°C.
- Centrifuge microcentrifuge tubes for 1 minute at 1000 x g at 4°C. Keep a small sample as "unbound" fraction. Carefully remove the supernatant.
- Resuspend mNeonGreen-Catcher (agarose beads) in 1 mL Lysis Buffer.
- Centrifuge mNeonGreen-Catcher (agarose beads) for 1 minute at 1000 x g and carefully remove the supernatant.
- Repeat wash steps twice for a total of 3 washes.

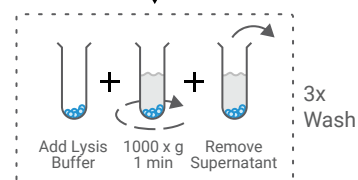
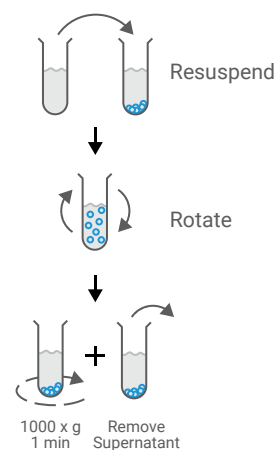
#### Step 3-4



#### Step 5-9



#### Step 10-15

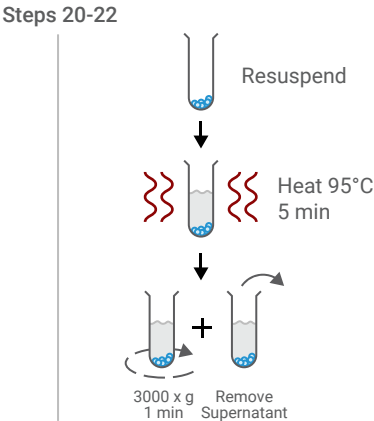
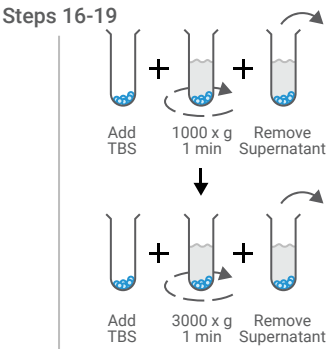


Bead Washing and Solution Changes

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

Elution Preparation

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



Explore our Full Catcher Product Line

| Product                    | Item No.    |
|----------------------------|-------------|
| GFP-Catcher                | ABIN5311508 |
| GFP-Catcher Magnetic Beads | ABIN7272855 |
| RFP-Catcher                | ABIN5311510 |
| RFP-Catcher Magnetic Beads | ABIN7529450 |
| BFP-Catcher                | ABIN5311512 |
| GST-Catcher                | ABIN5311506 |
| MBP-Catcher                | ABIN5311504 |
| mNeonGreen-Catcher         | ABIN7529451 |

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