Omnimabs® GST Pull-down Kit

Packaging List

Name	Catalog Number	Packaging
GST Pull-down Kit	OM643422	100T/Kit

Product Overview

The Omnimabs® GST Pull-down Kit can efficiently capture and purify proteins that interact with GST-tagged fusion proteins without the need for centrifugation. The kit provides GST-tagged protein agarose magnetic beads and a magnetic rack to achieve rapid and convenient magnetic separation of proteins, as well as optimized matching buffers.

Compared with agarose-based materials, the GST-tagged protein agarose magnetic beads have been optimized to bind more efficiently and specifically to GST-tagged fusion proteins, with a lower non-specific protein adsorption rate, more uniform elution conditions, and can significantly reduce the time required for experimental operations.

This product is mainly used for research related to studying protein-protein interactions after in vitro expression and purification of proteins. (Increase or decrease the number of washes according to the binding strength and background.)

Kit Composition

Component	Specification
GST-tagged protein agarose magnetic beads	5 mL (50% v/v)
PMSF (100x)	1 mL
Pull-down Buffer	100 mL
Washing Buffer	100 mL
Protein fast staining solution	50 mL
SDS-PAGE Sample Loading buffer (5x)	10 mL
Magnetic rack	Double-row 16-well magnetic rack

Operating Procedure

1. **Magnetic Bead Preparation**

   Thoroughly mix the Omnimabs® GST-tagged protein agarose magnetic beads. Transfer 50 µL of the magnetic bead suspension to a centrifuge tube. Place the tube on the magnetic rack. After magnetic separation, discard the supernatant. Then add 500 µL of Pull-down buffer, mix well, place the tube on the magnetic rack again, and discard the supernatant after magnetic separation. (The amount of magnetic beads added can be adjusted according to experimental requirements.)

2. **Sample Preparation**

   Take a 1.5 mL centrifuge tube, add an appropriate amount of GST-tagged fusion protein and the protein to be tested for interaction, and mix with the pre-treated GST-tagged protein agarose magnetic beads. At the same time, add PMSF in proportion and supplement with Pull-down buffer to a total volume of 500 µL.

   Note: Please ensure that the GST-tagged fusion protein and the protein to be tested for interaction have been purified.

3. **Protein Binding**

   Incubate the above mixture on a tumbler mixer at 4°C for 2 - 8 hours or overnight. Then place the tube on the magnetic rack and discard the supernatant after magnetic separation.

4. **Washing**

   Add 500 µL of Washing Buffer to the centrifuge tube, incubate on a tumbler mixer for 5 - 10 minutes, then place the tube on the magnetic rack and discard the supernatant after magnetic separation. Repeat this step 3 - 5 times.

5. **Protein Detection**

   Add 50 - 100 µL of SDS-PAGE Sample Loading Buffer (1×) to the above centrifuge tube and heat the sample in a 100°C water bath or metal bath for 10 minutes. Separate the magnetic beads using the magnetic rack and retain the supernatant containing the target antigen. Then the sample can be detected by Western blot or stored at -80°C.

Optional Step:

- **SDS-PAGE Detection**: Remove the run PAGE gel and place it in a plastic container. Add an appropriate amount of protein fast staining solution to cover the PAGE gel and then place it on a shaker. The staining time can be 0.5 - 2 hours or overnight. After staining, place the PAGE gel in water for storage and take pictures.

Precautions

1. Please read this operating manual carefully before conducting the experiment.
2. The magnetic beads should be shaken thoroughly before use.
3. The magnetic beads should be stored in the storage solution to prevent drying.
4. Do not freeze or centrifuge the magnetic beads to avoid irreversible aggregation.
5. This product is for research use only.