Glutathione Magarose Beads

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1. Product Description

Magarose Beads have superparamagnetism and rapid magnetic responsiveness. Peptides, proteins, antibodies, oligomeric nucleotide biological ligands can be coupled to the surface of microspheres. **Magarose Beads** is an important carrier of the medical and molecular biology research tools. The particle size of **Magarose Beads** is about 30 to 100 μm and it is more suitable for biological examination and purification experiment.

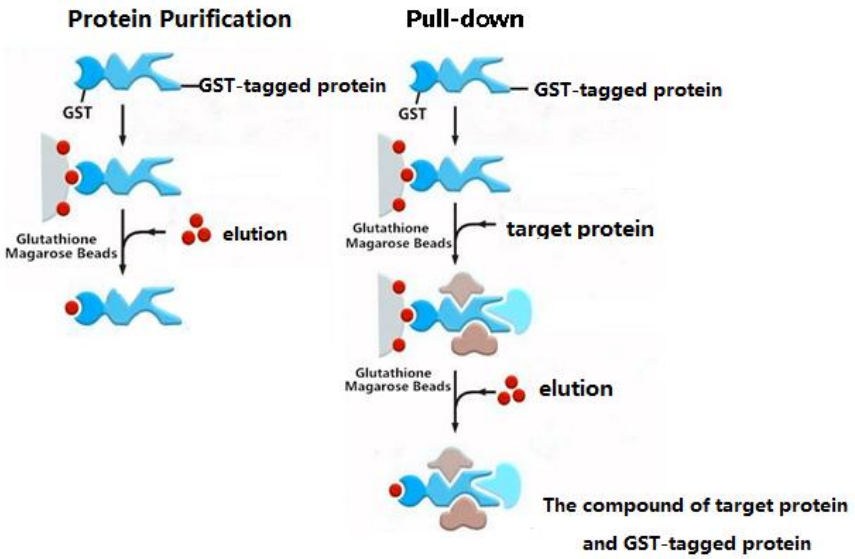
Glutathione Magarose Beads is an affinity chromatography medium for easy, one-step purification of glutathione S-transferase (GST)-tagged proteins produced using the pGEX series of expression vectors, other glutathione S-transferases and glutathione binding proteins. **Glutathione Magarose Beads** adsorb the target protein through affinity function. And under the magnetic force, the fusion protein is separated from the expression system. **Glutathione Magarose Beads** can be usded in GST Pull-down experiments, the operation is simple and quickly.

Table 1. Characteristics of **Glutathione Magarose Beads**

Item	Description
Matrix spherical	Magnetic agarose
Ligand	glutathione
binding capacity(/ml medium)	5-10 mg GST-tagged protein
Particle size (μm)	30-100
Magnetic beads volume	20%(V/V) slurry
Storage solution	1X PBS containing 20% ethanol
Storage	2℃ - 8℃

2. Purification Procedure

This protocol offers general guideline for protein purification and pull-down. The protocol uses 100 μL of **Glutathione Magarose Beads**, but this can be scaled up or down as required.



2.1 Buffer Preparation

Water and chemicals used for buffer preparation should be of high purity. It is recommended filtering the buffers by passing them through a 0.22μm or 0.45 μm filter before use.

Binding/Wash Buffer: PBS, pH 7.4 (140 mM NaCl, 2.7 mM KCl, 10 mM Na_2HPO_4, 1.8 mM KH_2PO_4, pH 7.4)

Elution Buffer: 50 mM Tris-HCl, 10-20 mM reduced glutathione, pH8.0

2.2 Preparation of the Magnetic Beads

1) Completely resuspend the beads by shaking or vortexing the vial.

2) Transfer 500 μl **Glutathione Magarose Beads**(20% v/v) into a clean tube.

3) Place the tube on a magnetic separation rack to collect the beads. Remove and discard the supernatant.

4) Add 1 ml Binding/Wash Buffer to the tube and invert the tube several times to mix. Use the magnetic separation rack to collect the beads and discard the supernatant. Repeat this step twice.

2.3 Protein Purification

1) Transfer the GST-tagged Protein lysate to **Glutathione Magarose Beads .** Incubate the tube at room temperature with mixing (on a shaker or rotator) for 10 -30 minutes. Place the tube on a magnetic separation rack to collect the beads. Remove and discard the supernatant. If necessary, keep the supernatant for analysis.

2) Add 1ml Binding/Wash Buffer to the tube and mix well, use the magnetic separation rack to collect the beads and discard the supernatant. Repeat the wash step three more times.

3) Add 200-300μl elution buffer, mix well and incubation for 5-10min. Use the magnetic separation rack to collect the beads and transfer the supernatant into a new tube. Repeat this step one more time.

2.4 Pull-Down

1) Prepare the Magnetic Beads as 2.1.

2) Transfer the GST-tagged Protein to **Glutathione Magarose Beads .** Incubate the tube at room temperature with mixing (on a shaker or rotator) for 10 -30 minutes. Place the tube on a magnetic separation rack to collect the beads. Remove and discard the supernatant. If necessary, keep the supernatant for analysis.

3) Add 1ml Binding/Wash Buffer to the tube and mix well, use the magnetic separation rack to collect the beads and discard the supernatant. Repeat the wash step two more times.

4) The compound of target protein and GST-tagged protein

Transfer the target Protein to the **Glutathione Magarose Beads** binding with GST-tagged protein . Incubate the tube at room temperature with mixing (on a shaker or rotator) for 10 -30 minutes. Place the tube on a magnetic separation rack to collect the beads. Remove and discard the supernatant. If necessary, keep the supernatant for analysis.

5) Add 1ml Binding/Wash Buffer to the tube and mix well, use the magnetic separation rack to collect the beads and discard the supernatant. Repeat the wash step two more times.

6) Add 200-300μl elution buffer, mix well and incubation for 5-10min. Use the magnetic separation rack to collect the beads and transfer the supernatant into a new tube. Repeat this step one more time.

2.5 Analysis

Identify the fractions containing the GST-tagged protein. Use UV absorbance, SDS-PAGE, or western blot.

3. Related Products

Product	Cat. No.	Size
Glutathione Magarose Beads	SM002001	1 ml
	SM002005	5 ml
	SM002025	25 ml
	SM002100	100 ml
	SM00201L	1 L