



Con A Magarose Beads

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1. Product Description

Con A MagPoly Beads are superparamagnetic polymer beads with surface modification Concanavalin A (Con A) Con A is a plant haemagglutinin separated from giant bean (Jack bean, Canavalia ensiformis), which can binds α -D-pyran mannose, α -D-pyran on glucose and Molecular groups related to its space position of the combination. Con A binds to carbohydrate molecules mainly in the hydroxyl part of C-3, C-4 and C-6. Con A combines better with D-pyranoid mannose than with D-pyranosaccharide. **Con A MagPoly Beads** are used to isolate and purify some glycoproteins, membrane proteins, sugar lipids, polysaccharides, membrane vesicles with mannitol or glucoside residues, IgM, hormone lipoproteins and so on. Substances such as trypsin inhibitors in human serum, alkaline phosphatase, calf spleen phosphodiesterase, various variants of alpha-fetoglobulin and certain hormones such as chorionic gonadotropin (HCG) and luteinizing hormone (LH) can be purified with it.

Table 1. Characteristics of Con A MagPoly Beads

Item	Description
Matrix	Ploymer magnetic beads
Ligand	Concanavalin A
Binding Capacity	>10 μ g conalbumin/mg Beads
Particle Size (μ m)	1 μ m
Storage Buffer	20 mM Tris PH 7.4, 0.01% Tw20 (v/v), 0.05% kv300 (v/v)
Beads Concentration	10 mg/ml
Storage Temperature	2°C- 8°C

2. Purification Procedure

2.1 Sample preparation

Mammalian cell plasma membrane preparation: Samples were chopped and homogenized with a pre-cooled solution containing 1 mM CaCl_2 , protease inhibitors, and 50 mM HEPES (pH7.4). After filtration, centrifuge $5000 \times g$ for 30 seconds and discard the supernatant. The membrane fragments can be suspended by equilibrium solution and the plasma membrane can be separated by sucrose density gradient centrifugation.

- 1) Preparation of the plasma membrane: Cells are collected and homogenized in an equilibrium solution.
- 2) Collect cells and suspended with a balancing solution.

2.2 Buffer preparation

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

Binding/Wash Buffer: 20mM Tris, 0.1M NaCl, 1mM CaCl_2 , 1mM MgCl_2 , 1mM MnCl_2 , 0.1% Tween-20, pH7.4

Elution Buffer: 20mM Tris-HCl, 0.5M NaCl, 1mM CaCl_2 , 1mM MnCl_2 , 0.1M-0.2M Dew α -D-methyl glucoside or α -D-methyl glucoside, pH7.4

2.3 Purification

2.3.1 Preparation of the Magnetic Beads

- 1) Completely resuspend the beads by shaking or vortexing the vial.
- 2) Transfer 100 μ l **Con A MagPoly Beads** to a new tube.
- 3) Place the tube on a magnetic separation rack to collect the beads at tube wall. Remove and discard the supernatant.
- 4) Add 0.5 ml 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.





2.3.2 Sample Adsorption

- 1) Add the sample prepared in Step 2.2 to the balanced packing in the previous step, suspend the packing, place it in the turnover mixer at room temperature or gently turn the centrifugal tube manually, mixing time 1 h.
- 2) Place the centrifugal tube on the magnetic separator, and the supernatant is absorbed after all the magnetic beads are absorbed. If necessary, the supernatant can be retained for further testing.
- 3) Add 200 μ l wash buffer to the magnetic beads, mix evenly, place on the magnetic separator, and then absorb and discard the supernatant after all the magnetic beads are absorbed. Repeat the wash at least 3 times.

2.3.3 Elution destination sample

- 1) Add 50-100 μ l elution buffer into the magnetic beads and mix well. Place the beads in the turning mixer at room temperature or gently turn the centrifuge tube manually for 10 min.
- 2) Place the centrifugal tube on the magnetic separator, and after all the magnetic beads were absorbed, the supernatant was absorbed as the target sample.

3. Related Products

Product	Cat. No.	Size
Con A MagPoly Beads	SM041001	1 ml
	SM041005	5 ml
	SM041010	10 ml
	SM041025	25 ml

