Maleimide Agarose Magnetic Particles
PRODUCT DATA SHEET

Maleimide Agarose Magnetic Particles

Description

Maleimide agarose magnetic beads, with good rigidity, magnetic responsiveness and monodispersity, surface modification is rich in N-ethyl maleimide (-NEM), using crosslinked agarose as the matrix, can interact with thiol (-SH) -containing biological ligands. For example, proteins, antibodies, oligonucleotides and drug molecules are combined by stable thioether covalent coupling method. Compared with traditional carboxyl and amino magnetic beads, the mercapto-containing biological ligands are simply dissolved in a near-neutral coupling buffer (pH 6.5-7.5). The maleimide group provides a specific chemical reaction site that can be covalently bound to biomolecules containing mercaptan groups, thereby enhancing the stability and specificity of the binding. It has the advantages of simple operation, mild coupling conditions and fast and efficient biological ligand coupling. The magnetic beads have a wide range of applications, including but not limited to immunoanalysis, protein purification, nucleic acid extraction, cell sorting, and enzyme fixation.

Abvigen can provide high quality maleimide agarose magnetic beads in different particle sizes (15 ~ 40 μm / 60 ~ 90 μm). Microsphere products have uniform particle size, good chemical stability, large specific surface area, good monodispersity, mature and stable production process, high repeatability between batches of products, and easy surface modification and modification. It can meet the needs of various customers, testing and production of different personalized materials.

For custom sizes, formulations or bulk quantities please contact our customer service department.

Website: www.abvigen.com Phone: +1 929-202-3014 Email: info@abvigenus.com

Product List

Cat No	Product Name	Concentration	Surface	Size
BMPA-15-MAL	Maleimide Agarose Magnetic Particles, 15-40 μm	10% v/v	N-ethyl maleimide	2 mL
BMPA-60-MAL	Maleimide Agarose Magnetic Particles, 60-90 μm	10% v/v	N-ethyl maleimide	2 mL

1378 US-206 Ste 6-126, Skillman, NJ USA
Email: info@abvigenus.com
Tel: 1-816-388- 0112 Fax: 1- 888-616-0161

Characteristics

Type: Maleimide Agarose Magnetic Particles

Concentration: 10% v/v

Mean particle size: 15 ~ 40 μm / 60 ~ 90 μm

Buffer: DMAC

Surface: N-ethyl maleimide

Size: 2 mL

Storage temperature: Storage at 2 - 8°C

Quality guarantee period: 24 months

Highlights

The biological coupling method is simple and efficient

Fast magnetic responsiveness

Good dispersion in biological samples

Abundant ligand-specific binding sites and high binding load

Low non-specific adsorption

Coupling Preparation

1. Centrifugal tube, magnetic rack.
2. Recommended coupling buffer: boric acid buffer (5 mmol/L), you can configure other types, pH 6.5-7 is appropriate.
3. Recommended closed buffer: cysteine (10 mmol/L), can be configured with other types, need to contain mercaptol groups.
4. Recommended cleaning buffer: ultra-pure water, or 50 mM Tris-HCl, 0.15 M NaCl, pH 7.2.
5. Thiol ligands such as target proteins and antibodies that need to be coupled.

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Operation Process (For Example Reference Only)

1. The magnetic beads were mixed evenly, 1 mL magnetic beads (10%, v/v) were added to the 2 mL centrifuge tube, and the supernatant was removed by magnetic separation.

(Note: "Magnetic separation" means that the centrifugal tube is placed in an external magnetic field until the magnetic bead is completely adsorbed, which takes about 30 s.)

2. Add 1 mL of anhydrous ethanol, mix well, magnetic separation to remove the supernatant. (repeat once)
3. Add 1 mL ultra-pure water, mix well, magnetic separation to remove supernatant. (repeat 2 times)
4. Add 200 μg ~ 500 μg sulfhydryl antibody or protein solution (dissolved in 1 mL of coupling buffer in advance) at room temperature rotating mixing 16 ~ 24 h, magnetic separation to remove supernatant.

(Note: The magnetic bead load is higher, and more antibodies can be coupled; If there is less antibody to be coupled, the amount of magnetic beads can be appropriately reduced.)

5. Add 1 mL cleaning buffer, mix evenly, magnetic separation to remove the supernatant. (repeat 3 times)
6. Add 200 μL closed buffer, mix the resuspended magnetic beads, swirl at room temperature for 2 h, magnetic separation to remove the supernatant.
7. Add 1 mL cleaning buffer, mix the re-suspended magnetic beads for about 30 s, magnetic separation to remove the supernatant. (repeat 3 to 5 times)
8. Disperse the above magnetic beads in 0.5 mL PBS at pH 7.4 for short-term storage, or disperse in PBS at pH 7.4, 0.1% BSA, 0.02% NaN_3 long-term storage.

Storage

This product should be sealed without water.

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Notes

1. In the coupling process (except for the target ligand), the substances containing sulfhydryl should be less than 1000 ppm (0.1%), such as: cysteine, etc. Please note whether your antibody and protein solution contains the above substances.
2. If dithithreitol (DTT) or TCEP is used to reduce disulfide bonds in proteins for coupling with sulfhydryl groups, the DTT or TCEP must be completely removed using a desalt column before the NEM bead coupling reaction is initiated.
3. Repeated freezing and thawing should be avoided during the use and preservation of magnetic beads.
4. NEM agarose magnetic beads can not be dried.
5. Different antibodies and proteins have different binding abilities with NEM agar-agar beads, and customers can optimize the amount of different antibodies or proteins.
6. This magnetic bead is sensitive to humidity, please seal it in time after use, and store it at 2-8°C. Please return it to room temperature before use.

Ordering Information

Website: www.abvigen.com

Phone: +1 929-202-3014

Email: info@abvigenus.com