Product Specification

Product Name: Epoxy-Activated MagPoly Beads

Product Code: MAGP026 / MAGP027 / MAGP028 / MAGP029

PRODUCT DESCRIPTION:

Epoxy-Activated MagPoly Beads are high-performance superparamagnetic beads designed for biological analysis and detection. These beads facilitate the direct covalent attachment of proteins via their amino, sulfhydryl, or hydroxyl functional groups. Researchers can tailor this pre-activated medium into specialized affinity matrices, enabling the rapid, streamlined, one-step purification of target molecules from heterogeneous biological samples.

Product Code	Size
MAGP026	1 ml
MAGP027	5 ml
MAGP028	10 ml
MAGP029	100 ml

Item	Description
Matrix:	Polymer Magnetic Beads
Binding Capacity:	> 300 nmol/mg of Magnetic Beads
Particle Size (µm):	1µm
Beads Concentration:	10 mg/ml
Storage Buffer:	100% Isopropanol
Storage Temperature:	2°C - 8°C

COUPLING PROCEDURE

1. Buffer Preparation

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

- **Cleaning Buffer:** 1mM HCl
- **Coupling Buffer**: 0.2M $NaHCO_3$, 0.5M NaCl, pH 8.0
- **Blocking Buffer:** 0.5M ethcholamine, 0.5M NaCl, pH 8.3 or 0.1M Tris, pH 8.5
- **Wash Buffer 1:** 0.1M acetic acid-sodium acetate, 0.5M NaCl, pH 4.0
- **Wash Buffer 2:** 0.1M Tris-HCl, 0.5M NaCl, pH 8.0
- **Storage Buffer:** 1X PBS containing 20% ethanol

Note: The coupling process should be carried out using bicarbonate or borate buffers. Tris and other buffer salts containing amino groups or other nucleophilic components **should not** be used as they will couple to the activated medium themselves.

2. Ligand Coupling

1) Thoroughly mix the vial containing the **Epoxy-Activated MagPoly Beads** then transfer appropriate amounts of the beads as needed into a clean centrifuge tube. Use a Magnetic Separation Rack to collect the beads at the tube wall and discard the supernatant.

2) Add Deionized Water to the tube, then pipette the solution up and down for 5 to 10 times to mix well. Place the centrifuge tube on the Magnetic Separation Rack for about 1 min to collect the beads and discard the supernatant. Repeat this step once more with the Deionized Water and another with the Coupling Buffer.

3) Add the prepared sample into the tube (the concentration of the magnetic beads in the sample would be about 30-50 mg/ml) and mix well. Place the tube on a rotating mixer and incubate it at room temperature for 24 to 48 hours. Ensure that the magnetic beads are fully homogenized, otherwise the coupling efficiency would be impacted.

4) Use the Magnetic Separation Rack to collect the beads. Transfer the supernatant into a new tube for sample analysis. With reference to Step 2, Wash the beads **two times** with each of these liquids in the following order: **Deionized Water**, **Wash Buffer 1**, **Deionized Water**, **Wash Buffer 2**, and then **Deionized Water** again. Afterwards, store the beads in the Storage Buffer at 2℃-8℃.

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