Product Specification

Product Name: Carboxyl-Activated MagPoly Beads

Product Code: MAGP021 / MAGP022 / MAGP023 / MAGP024 / MAGP025

PRODUCT DESCRIPTION:

Carboxyl-Activated MagPoly Beads are superparamagnetic beads with their surfaces modified with carboxyl functional groups. This surface modification enables the covalent coupling of peptides, proteins, antibodies, oligonucleotides and other biological ligands via the mediation of specialized chemical reagents (such as EDC). **Carboxyl-functionalized MagPoly beads** facilitate the rapid identification and isolation of specific biomolecules making them indispensable for medical diagnostics and molecular biology research.

Product Code	Size
MAGP021	1 ml
MAGP022	2 ml
MAGP023	10 ml
MAGP024	25 ml
MAGP025	100 ml

Item	Description
Matrix:	Polymer Magnetic Beads
Binding Capacity:	> 10mg IgG/ml
Particle Size (µm):	1µm
Beads Concentration:	10 mg/ml
Storage Buffer:	1X PBS containing 20% Ethanol
Storage Temperature:	2℃ - 8℃

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.

- **Activation Buffer:** 50mM MES, pH 5.0
- **EDC Buffer:** 10 mg/ml in 50mM MES, pH 5.0
- **Blocking Buffer:** 50mM Tris, pH 7.4 or 50mM Cholamine, Ph 8.0
- **Wash Buffer:** 1X PBS containing 0.1% Tween-20 or Triton X-100, pH 7.4
- **Storage Buffer:** 1X PBS containing 0.01% Tween-20, 0.02% (v/v) NaN_3, pH 7.4

2. Magnetic Beads Activation

1) Transfer 200µl of **Carboxyl-Activated MagPoly Beads** into a clean centrifuge tube and place it in a sample mixer to ensure that it is fully homogenized.

2) Place the centrifuge tube on a Magnetic Separation Rack for about 1 min to collect the beads at the tube wall, then remove and discard the supernatant.

   Note: DO NOT discard the magnetic beads. This applies to the following steps as well.

3) Add 200ul of Activation Buffer, then pipette the solution up and down for 5 to 10 times to mix well. Place the tube on the Magnetic Separation Rack for about 1 min to collect the beads, then remove and discard the supernatant. Repeat this step one more time.

4) Add 200ul (10mg/mL) of EDC solution into the tube and mix well.

5) Incubate the solution at room temperature for 30 mins. Ensure that the magnetic beads are uniformly distributed within the solution, otherwise the activation efficiency would be impacted.

6) Use the Magnetic Separation Rack to collect the beads and discard the supernatant. Rinse the beads twice with pre-cooled deionized water then IMMEDIATELY add the Activation Buffer to the beads to avoid the hydrolysis of the activated groups.

3. Ligand Coupling

1) Add 200ul of Activated Buffer containing 1-5 mg/mL of antibodies to the activated beads from the previous step and mix well. Incubate the tube overnight at room temperature, ensuring that the magnetic beads are fully homogenized.

2) Use the Magnetic Separation Rack to collect the beads and discard the supernatant. Add 500ul of Blocking Buffer to the tube then incubate it at room temperature for 30 mins.

3) Wash the Beads twice with the Wash Buffer to remove any non-specific adsorption. Afterwards, wash the beads with 1X PBS twice. Magnetic beads with the ligands coupled can be stored in the Storage Buffer at 2-8℃.

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