

[Cat. No.] TA-1013-1

Introduction

Bioneer AccuNanoBead Epoxy Magnetic NanoBeads are pre-activated, uniform, silica-based paramagnetic beads coated with high density epoxy functional groups on the surface. The beads are used to covalently conjugate amine or hydroxyl group- containing ligands. Coupling of Hydroxyl-, Amine- and Thiol-containing ligands is favored at pH 11-12, pH >9, and pH 7.5- 8.5, respectively. Water-insoluble ligands can be conjugated in 50% organic solvent (Dioxane, Dimethylformamide). Epoxy Magnetic NanoBeads are most suitable for conjugation of large proteins.

Features & Benefits

- Covalently couples with high efficiency at pH 9–12, 20°C to 40°C, 16 h–days
- Stable covalent bond with minimal ligand leakage
- Produces reusable immunoaffinity matrices
- Low nonspecific binding
- Immobilize protein or peptide
- Applications: Cell sorting, Immunoprecipitation; Purification for Antibodies, Proteins/Peptides, DNA/RNA

Components

Components	Amount
AccuNanoBead™ Epoxy Magnetic NanoBeads	0.5 g

* **Note:** For research use only. Not for use in diagnostic or therapeutic procedures.

Materials to be Prepared by User

Magnetic Separator	
Conjugation Buffer	PBS buffer, pH 8.0 (adjust with NaOH) or 0.1 M sodium phosphate, pH 8.0
Blocking Buffer	0.5 M Tris-HCl, pH 8.0
Storage Buffer	PBS, pH 7.4 including 0.1 % Sodium azide and 0.02 % Tween 20

* **Note:** Buffer could be changed depending on user's needs.

Specifications

AccuNanoBead™ Carboxyl Magnetic NanoBeads	
Composition	Epoxy Magnetic NanoBeads
Binding capacity	DMT Loading: ≥ 1 umol/g of beads
Size	Average 400 nm
Concentration	0.5 g(Solid)

Storage

Store at 2~6°C

This product can be stable for 1 years at at 2~6°C.

Expired date

Indicated on the label.

Precautions

- Do not vigorously vortex AccuNanoBead™ Epoxy Magnetic NanoBeads.
- An exact protocol may need to be optimized by the user.

Online Resources



Korean



English

Visit our product page for additional information and protocols

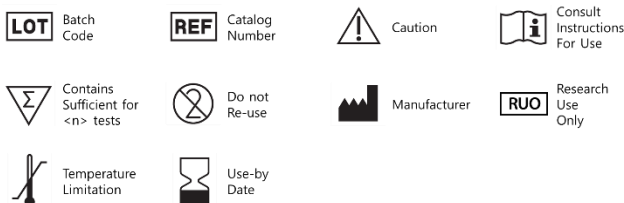
Ordering Information

Description	Cat. No.
AccuNanoBead™ Epoxy Magnetic NanoBeads	TA-1013-1

Notice

BIONEER corporation reserves the right to make corrections, modifications, improvements and other changes to its products, services, specifications or product descriptions at any time without notice.

Explanation of Symbols



Experimental Procedures (The protocols are scalable and can be optimized)

Steps		Procedure Details
1	 Coupling Protocol	1. Transfer Epoxy Magnetic Nanobeads to 1.5ml tube. 2. Washing several time using the conjugation Buffer. (PBS buffer, PH8.0) 3. Discard the washed buffer using a magnet. 4. Add the protein 1 to 10mg of protein per bead 1g. 5. React for 20 ~ 24 hours at room temperature using a rotator. (Depending on the stability of the protein, it can be carried out for 24 hours at 4°C. Reactivity is good at room temperature due to chemical reaction. 6. Remove the reaction solution by using magnet, replace with blocking buffer. (0.5 M Tris-HCl, pH 8.0 or 0.5 M Ethanolamine, pH 8.0) and react at 4°C for 12~16 hours.) 7. Remove the reaction solution by using magnet, washing well with PBS buffer.