AccuNanoBead™ Ni-NTA Magnetic NanoBeads

[Cat. No.] TA-1017-1

Introduction

- Bioneer AccuNanoBead Ni-NTA Magnetic NanoBeads is designed for rapid purification of 6xHis-tagged proteins. Ni-NTA Magnetic NanoBeads has nitrilotriacetic acid (NTA) groups with charged nickel covalently bind to surface of Silica based magnetic nanobeads. Due to the high affinity, Ni-NTA Magnetic NanoBeads can be used for capturing 6xHis-tagged proteins. Bound 6xHis-tagged proteins can be temporarily immobilized under magnetic attraction, so the other parts in supernatant can be removed easily and efficiently. Bound proteins can be directly used in downstream applications or be eluted off the beads.

Features & Benefits

- Covalently couples with high efficiency
- Stable covalent bond with low levels of ligand leakage
- Produces reusable immunoaffinity matrices
- Low nonspecific binding
- Purification of His-tagged proteins
- Application: Purification for Antibody Protein/Peptide

Components

Components	Amount
AccuNanoBead™ Ni-NTA Magnetic NanoBeads	0.5 g/ 25ml in 20% Ethanol

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

Materials to be Prepared by User

Magnetic Separator	
Binding/Wash Buffer	50 mM sodium phosphate, pH 7.4 300 mM NaCl 0.02 % Tween 20
Elution Buffer	50 mM sodium phosphate, pH 7.0 300 mM NaCl 500 mM Imidazole 0.1 % Tween 20

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

Specifications

AccuNanoBead™ Ni-NTA Magnetic NanoBeads	
Composition	Ni-NTA Magnetic NanoBeads
Binding capacity	≥9 mg/ g of beads
Size	Average 400 nm
Concentration	0.5 g/ 25ml

Storage

Store at room temperature.
This product can be stable for 3 years at room temperature (25°C).

Expired date

Indicated on the label.

Precautions

- Do not vigorously vortex *AccuNanoBead*™ Ni-NTA 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™ Ni-NTA Magnetic NanoBeads	TA-1017-1

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

LOT Batch Code
REF Catalog Number
Caution
Consult Instructions For Use
Contains Sufficient for <n> tests
Do not Re-use
Use-by Date
RUO Research Use Only
Temperature Limitation

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

Steps		Procedure Details
1	**Magnetic Beads Preparation**	1. Place the beads in an ultrasonicator to completely disperse them. 2. Add Binding/Wash Buffer and disperse the beads by pipetting. 3. Hold the bead on the tube wall by holding the tube close to the magnet. 4. Aspirate the supernatant with a pipette and discard. 5. Remove the magnet from the tube, add binding/wash buffer and disperse the beads by pipetting. 6. Repeat steps 3 through 5 three times.
2	**Purification**	1. Prepare His-tagged proteins. 2. Mix the protein to the dispersed beads in the binding/wash buffer. 3. Rotate for 30 minutes on a rotator at room temperature. 4. Hold the bead on the tube wall by holding the tube close to the magnet. 5. Discard the supernatant with a pipette and add binding/wash buffer to disperse. 6. Repeat steps 4 through 5 three times.
3	**Elution**	1. Bring the tube containing the beads dispersed in the Elution/Wash Buffer from the previous process close to the magnet and discard the buffer. 2. Add Elution Buffer, vortex, and disperse the NTA-Ni-protein beads by pipetting. 3. Rotate on a rotator for 30 minutes at room temperature. 4. Bring the magnet close to the tube to transfer the eluted protein in the supernatant to the tube.

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