

[Cat. No.] TA-1014-1

## Introduction

Bioneer AccuNanoBead C18(Resersed-Phase) Magnetic NanoBeads are uniform, silica-based, para-magnetic beads containing hydrophobic C18 Alkyl groups on their surface. The beads are specifically designed for quickly purifying, desalting and concentrating femtomolar to picomolar scale of peptides or proteins, manually or automatically without the need for laborious repeat pipetting and centrifugation. C18 Magnetic Nanobeads are recommended for purification, desalting and concentration of low molecular weight proteins or peptides.

## Features & Benefits

AccuNanoBead™ C18 Nano Beads is silica magnetic nano beads containing hydrophobic C18 alkyl groups on the surface. It can be combined with peptides or proteins by using strong hydrophobic absorption interaction. Therefore, the beads can be used for purification and concentration of peptides or protein fragments and desalting prior to mass-spectrometry (MS) analysis.

## Components

| Components                           | Amount |
|--------------------------------------|--------|
| AccuNanoBead™ C18 Magnetic NanoBeads | 0.5g   |

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

## Materials to be Prepared by User

| Magnetic Separator    |                                                          |
|-----------------------|----------------------------------------------------------|
| Equilibration buffer  | 0.5% TFA (trifluoroacetic acid) in 5% ACN (acetonitrile) |
| Sample Binding Buffer | 2% TFA in 5% ACN                                         |
| Washing buffer        | 0.5 % TFA in 5% ACN                                      |
| Elution Buffer        | 70% ACN                                                  |

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

## Specifications

| AccuNanoBead™ C18 Magnetic NanoBeads |                        |
|--------------------------------------|------------------------|
| Composition                          | C18 Magnetic NanoBeads |
| Binding capacity                     | ≥ 300 nmol/g-beads     |
| Size                                 | Average 400 nm         |
| Concentration                        | 0.5 g(Solid)           |

## 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™ C18 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™ C18 Magnetic NanoBeads | TA-1014-1 |

## 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 | Manufacturer | RUO            | Research Use Only |                              |
| Temperature Limitation            | Use-by Date   |              |                |                   |                              |

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

| Steps |                              | Procedure Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1     | <b>Magnetic Beads</b>        | <ol style="list-style-type: none"> <li>1. Prepare magnetic beads dispersed in acetonitrile at a dilution of 500mg/25ml.</li> <li>2. Process the dispersed beads in an ultrasonic cleaner for about 30 seconds to completely disperse them.</li> <li>3. Transfer 25 µl (20 mg/ml) of fully dispersed magnetic beads to a microcentrifuge tube.</li> <li>4. After centrifugation, aspirate the supernatant with a pipette and discard.</li> <li>5. Disperse the remaining magnetic beads in the tube with 10 µl Equilibration Buffer.</li> </ol>                                                                                                                       |
| 2     | <b>Binding &amp; Washing</b> | <ol style="list-style-type: none"> <li>1. Mix the sample (10 µg peptide) with Binding Buffer and add to the tube containing the beads prepared earlier.</li> <li>2. Mix the beads and sample thoroughly using a pipette and leave at room temperature for 3 minutes to allow the peptides to bind to the beads.</li> <li>3. Place a magnet close to the tube and wait until the supernatant is clear. Discard the supernatant in the tube with a pipette.</li> <li>4. Redisperse the beads with 100 µl buffer in the tube.</li> <li>5. Pipette the supernatant by holding the tube close to the magnet.</li> <li>6. Repeat steps 4 through 5 three times.</li> </ol> |
| 3     | <b>Elution</b>               | <ol style="list-style-type: none"> <li>1. Add 5 µl of Elution Buffer, then redisperse the beads and wait 3 minutes at room temperature.</li> <li>2. Place the tube close to the magnet and transfer the supernatant containing the eluted peptide to a new tube.</li> <li>3. The eluted peptides are analyzed by MALDI-MS.</li> </ol>                                                                                                                                                                                                                                                                                                                                |