AccuNanoBead™ Streptavidin Magnetic NanoBeads (V1/2021-09-27)

[Cat. No.] TA-1015-1

Introduction

AccuNanoBead™ Streptavidin Magnetic NanoBeads are silica beads conjugated with high purity (>95%) streptavidin which allows binding to biotinylated molecules. This product can be used for immunoprecipitation, protein interaction, and purification of biotinylated antibodies and nucleic acids.

Features & Benefits

- Outstanding efficiency: Minimized loss through a strong magnetism out of magnetic nanobeads.
- Large binding capacity: Magnetic nanobeads with an average diameter of 400 nm gives rise to large surface areas for binding.
- High specificity: Reduced non-specific binding by using homogeneous spherical magnetic nanobeads.

Components

Components	Amount
AccuNanoBead™ Streptavidin Magnetic NanoBeads	50 mg/5 ml

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

Materials to be Prepared by User

PBS buffer	137 mM NaCl, 2.7 mM KCl, 10 mM Na_2HPO_4, 2 mM KH_2PO_4, pH 7.4
Binding buffer	PBS buffer, 0.1% BSA
Protein elution buffer	0.1 M Glycine-HCl, pH 2.5
Nucleic acid elution buffer	10 mM EDTA, pH 8.2, 95% formamide
Neutralization buffer	1 M Tris-HCl, pH 9.0
Nd magnet or Magnetic separation rack (Cat. No. TM-1010)	

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

Specifications

AccuNanoBead™ Streptavidin Magnetic NanoBeads	
Composition	Silica based magnetic nanobeads
Binding capacity	≥ 400 nmol/g of beads
Size	Average 400 nm
Concentration	50 mg/5 ml

Storage Buffer

AccuNanoBead™ Streptavidin Magnetic NanoBeads are supplied in 1X phosphate buffered saline (PBS) buffer (137 mM NaCl, 2.7 mM KCl, 10 mM Na_2HPO_4, 2 mM KH_2PO_4, pH 7.4).

Storage

Store at 2-8°C.

Precautions

- Do not freeze and vigorously vortex *AccuNanoBead*™ Streptavidin 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.

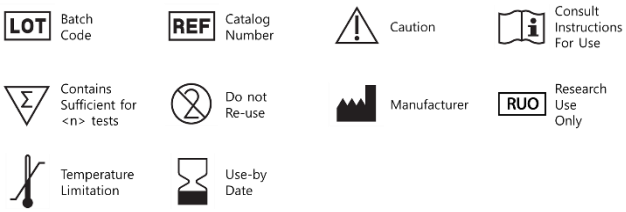
Ordering Information

Description	Cat. No.
AccuNanoBead™ Streptavidin Magnetic NanoBeads	TA-1015-1

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

Steps		Procedure Details
1	 **Equilibrating magnetic nanobeads**	1. Resuspend *AccuNanoBead*™ Streptavidin Magnetic NanoBeads by gently vortexing. 2. Transfer 1 ml (2 mg) of magnetic nanobeads to a 1.5 ml tube and place the tube on a Neodymium (Nd) magnet for 1 min. 3. Remove the supernatant. 4. Equilibrate by adding 500 µl of PBS buffer to the bead slurry and mix briefly. 5. Place the tube on the Nd magnet for 1 min and remove the supernatant. 6. Repeat step 4 and 5 once more.
2	 **Protein/Antibody or Nucleic acids Binding**	7. Load about 0.2-1 ml of the biotinylated sample onto the pre-equilibrated magnetic nanobeads. 8. Load up to 1 ml of Binding buffer onto the tube. 9. Incubate in a rotator for 15 min at room temperature. * **Note:** Make sure that the magnetic nanobeads are evenly resuspended. This is important for an efficient purification. 10. Place the tube on the Nd magnet for 1 min and remove the supernatant.
3	 **Washing magnetic nanobeads**	11. Add 500 µl of PBS buffer and wash the magnetic nanobeads by gently pipetting. 12. Place the tube on the Nd magnet for 1 min and remove the supernatant. 13. Repeat step 11 and 12 once more. * **Note:** After the final wash, the remaining PBS buffer should be removed completely.
4	**Elution**	
	 **Protein/Antibody**	14a. **For Denaturing elution:** Add appropriate amounts of Protein elution buffer and incubate at 70˚C for 5 min. 14b. **For Non-denaturing elution**: Add appropriate amounts of Protein elution buffer and incubate for a few minutes at room temperature. Then add a Neutralization buffer (10% of eluate) to the elution fraction. * **Note:** Protein elution buffer and Neutralization buffer should be mixed at a ratio of 9:1. 15. Place the tube on the Nd magnet for 1 min and transfer the elution fraction to a new tube.
	 **Nucleic acids**	14a. **For Biotinylated Nucleic acids:** Add appropriate amounts of Nucleic acid elution buffer and incubate at 65˚C for 2 min. 14b. **For Non-biotinylated Nucleic acids:** Add appropriate amounts of double distilled water and heat for 5 min. * **Note:** Short fragment's heating condition is at 65-70°C and that of large fragment is at 95°C. 15. Place the tube on the Nd magnet for 1 min and transfer the elution fraction to a new tube.