

Streptavidin Magnetic Beads (5µm)

Cat. No.: S1522859 | Pack size: 1ml; 5ml | Storage: 2-8°C, do not freeze

Product Information

Item	Details
Available Pack Size(s)	1ml; 5ml
Specifications & Purity	BioReagent, 10 mg/mL; 5 µm
Stability and Storage	Store at 2-8°C long term (36 months). Do not freeze.
Storage Conditions	Store at 2-8°C, Do not freeze
Shipped In	Wet ice, Do not freeze. This product requires cold chain shipping. Ground and other economy services are not available.

Product Description

Streptavidin magnetic beads exhibit highly specific reactions with biotinylated ligands such as proteins, antibodies, and nucleic acids, eliminating the need for activation, coupling, and blocking steps, and are easy to use. The streptavidin-modified magnetic beads have a particle size of 5 µm, high streptavidin loading capacity, and excellent hydrophilicity. They are superparamagnetic with good magnetic responsiveness and possess outstanding redispersibility and magnetic stability. The 5 µm beads have good uniformity and are suitable for applications such as single-cell sequencing, liquid-phase probe capture, nucleic acid pull-down, and bacterial detection.

Product Information

Parameter	Value
Concentration	10 mg/mL
Particle size	approx. 5 µm
Surface potential	approx. -20 mV
Streptavidin loading	70-80 µg/mg beads
Biotinylated BSA coupling capacity	10-15 µg/mg beads

Parameter	Value
Storage conditions	Sealed, 4°C, do not freeze. Shake well before use.

Scanning Electron Micrograph

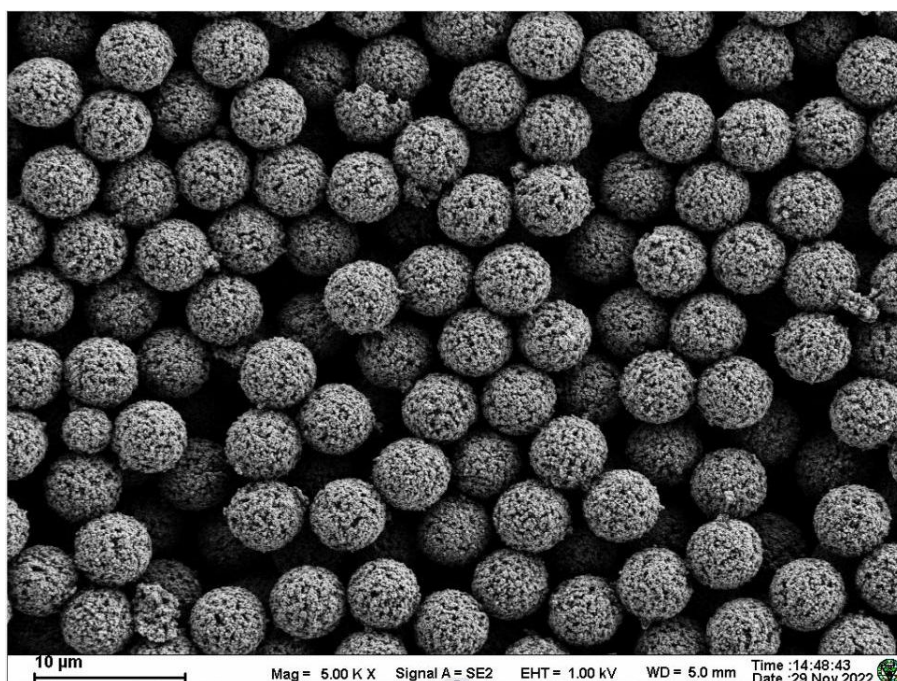


Figure 1. SEM image of streptavidin magnetic beads (5 μm).

Instructions for Use

The following protocol uses biotinylated antibody as an example; it can be adjusted according to different experimental requirements.

The streptavidin magnetic beads (5 μm) have good hydrophilicity and monodispersity. They can be used directly after vortexing to mix.

Solvents and Materials Used

CB: 0.02 M carbonate buffer, pH 9.0.

PBS: 0.02 M phosphate buffer containing 0.9% NaCl, pH 7.4.

Washing buffer: 15 mM PBS pH 7.4, 0.1% Tween 20.

Storage buffer: 15 mM PBS pH 7.4, 0.1% Tween 20 (containing a certain amount of glycine, casein, and preservative).

Procedure

1. Biotinylation of antibody:
 - Dilute 100 µg of antibody with CB to 100 µL.
 - Quickly add 2 µL of 1 mg/mL PEGylated biotin (to be prepared by the customer) while vortexing. Incubate at 37°C for 45 min.
 - Perform ultrafiltration centrifugation four times at 4000 × g for 10 min, then resuspend in PBS to 1 mg/mL.
2. Coupling of biotinylated antibody:
 - Take 1 mL of streptavidin-modified magnetic beads (10 mg/mL).
 - Add 20 µL of biotinylated antibody (recommended amount 20 µg) while vortexing.
 - Incubate at 37°C on a shaker for 1 h. **Note:** During shaking incubation, lay the tube horizontally to prevent bead sedimentation, which could affect coupling efficiency.
 - Perform magnetic separation and wash four times with washing buffer. Resuspend in storage buffer to the desired concentration.

Precautions

Before use, thoroughly mix the magnetic beads to avoid changes in bead concentration during aliquoting. Avoid prolonged sonication, which may damage the bead surface.

After taking the required amount of beads, perform magnetic separation and wash 2-3 times with pure water or the buffer solution to be used before proceeding with the experiment.

Avoid freeze-thaw cycles during the use and storage of the magnetic beads.

Contact & Global Offices

Whether you have a technical question, need help with a quotation, or want to inquire about an order, our regional teams are ready to assist. Please contact the office for your region; for general inquiries, the North American office is the corporate primary.

NORTH AMERICAN SALES, SUPPORT & GENERAL INQUIRIES

Aladdin Scientific Corporation

14078 Meridian Parkway, Riverside, CA 92518, USA

Phone: 1-833-552-7181

Sales: sales@aladdinsci.com

Customer Service: custserv@aladdinsci.com

EU SALES, LOGISTICS & LOCALIZED SUPPORT

Aladdin Biochem Deutschland GmbH

Westring 2, 33142 Büren, Germany

Phone: +02951 9383958

Support: support.eu@aladdin.com

Limitations & Disclaimer

- For Research Use Only (RUO). Not for use in human or animal diagnostics, therapeutics, or in vivo applications. Not for food, cosmetic, or household use.
- This product is not a CE-marked in vitro diagnostic device under IVDR (EU) 2017/746 and is not an FDA-cleared device under 21 CFR. Use is restricted to verified businesses, institutions, and qualified professionals for research and development purposes.
- Where any product component is classified as hazardous under CLP (EC) 1272/2008 or OSHA HCS (29 CFR 1910.1200), the product Safety Data Sheet (SDS) takes precedence over this document for handling, storage, and disposal information.
- Performance depends on sample type, sample condition, handling, and operator technique. Users are responsible for validating this product for their specific application.
- Aladdin product labels, SDS, COA, and approved specifications take precedence over this document. If product formulation, label, SDS, storage conditions, pack size, or quality specifications change, this document would be reviewed and reissued.