

ActiveMax® Streptavidin μBeads (non magnetic), premium grade (for cells, 41 μm)

Cat. No. MBS-C044

● Product Information

Product	Size	Amount
ActiveMax® Streptavidin μBeads (non magnetic), premium grade (for cells, 41 μm)	10 mg	2.8×10^5 beads

● Product Description

ActiveMax® Streptavidin μBeads (non magnetic), premium grade (for cells, 41 μm) are uniform, polystyrene beads of 41 μm with streptavidin on its surface. Streptavidin is a tetrameric protein providing 4 high-affinity biotin binding sites, which make it possible to quickly produce and customize your own sterile protein/antibody coupled beads for cell based assay, cell sorting, cell therapy process development and manufacturing use.

ActiveMax® Streptavidin μBeads (non magnetic), premium grade (for cells, 41 μm) are produced under sterile manufacturing conditions (ISO 5), and no animal- or human-derived components are used throughout the production process. It is produced under our rigorous quality control system that includes a comprehensive set of tests including sterility and endotoxin tests.

● Product Applications

ActiveMax® Streptavidin μBeads (non magnetic), premium grade (for cells, 41 μm) can be used for coupling of any biotinylated proteins or antibodies, and are ideal for numerous applications as follows:

- ◆ When coupled with biotinylated CAR target proteins, it can be used to stimulate or isolate CAR-T cells or UCAR-T cells.
- ◆ When coupled with biotinylated antibodies, it can be used to isolate antigen specific cells, including immune cells, tumor cells, etc.
- ◆ When coupled with biotinylated drug targets, it can be used for screening target specific antibodies by FACS.
- ◆ It can also be used for other cell based experiments that you need.

This product is for research use only and not intended for therapeutic or diagnostic use.

The Product performance has been carefully validated and tested for compatibility for cell culture, cell based assays and any other applications in the early preclinical stage. For use in clinical phases, we also offer a custom GMP product service that tailors to your needs. We will work with you to customize and develop a GMP-grade product in accordance with your requests that also meets the requirements for raw and ancillary materials use in cell manufacturing of cell-based.

● Formulation

Lyophilized in PBS with 0.1% HSA, pH 7.4. Trehalose is added as protectant before lyophilization.

● Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the Certificate of Analysis.

● Storage

This product is stable in storage under the following conditions:

- -20°C for 12 months in lyophilized state.
- -70°C for 3 months under sterile conditions after reconstitution.

Please protect from light and avoid repeated freeze-thaw cycles. Immediate use after reconstitution is highly recommended.

● Important Note

This product is for research use only and not intended for therapeutic or in vitro diagnostic use.

● General guidelines

It is recommended to mix ActiveMax® Streptavidin μBeads (non magnetic), premium grade (for cells, 41 μm) to a stock solution of 10 mg/mL (2.8×10^5 beads/mL) under ISO 5 clean conditions. Separate into working aliquots and store at -70°C immediately. Upon reconstitution, immediate use is recommended for best performance.

● Preparing μBeads for use

Washing the ActiveMax® Streptavidin μBeads (non magnetic), premium grade (for cells, 41 μm) to remove trehalose from the formulation buffer before use.

1. Resuspend the μBeads in the vial (i.e. vortex for >30 sec, or tilt and rotate for 5 min).
2. Transfer the desired volume of the μBeads to a sterile tube, centrifuge 3000g for 2 minutes, and discard the supernatant gently with a pipette.
3. Add an equal volume of sterile PBS buffer, or at least 1 mL, and mix (vortex for 5 sec, or keep on a roller for at least 2 min).
4. Centrifuge 3000g for 2 minutes, and discard the supernatant gently with a pipette.
5. Resuspend the washed the μBeads in the same volume of cell culture medium as the initial volume of the μBeads taken from the vial (Step 2).

● Conjugation procedure

1. Dilute the biotinylated molecule to an appropriate concentration referring to the quantity in Table 1.
2. Add the desired biotinylated molecule (proteins or antibodies) to the washed beads.
3. Incubate for 60 mins at room temperature with gentle rotation of the tube.
4. Place the tube in a magnet for 2–3 min and discard the supernatant.
5. Wash the coupled μbeads 3–4 times in sterile PBS buffer (pH7.2) to remove unbound biotinylated molecule in supernatant.
6. Resuspend to desired concentration in a suitable buffer for your downstream use.

Table 1. Capacities for per mg of ActiveMax® Streptavidin μBeads (non magnetic), premium grade (for cells, 41 μm)

Biotinylated target	Binding capacities	Recommended usage of biotinylated molecule	Recommended concentration in reaction
Biotinylated protein (μg)	≥9 ug/mg of μbeads	60~100 ug /mg of μbeads	60~100 ug/ml
Biotinylated antibody (μg)	≥30 ug/mg of μbeads	60~100 ug /mg of μbeads	60~100 ug/ml

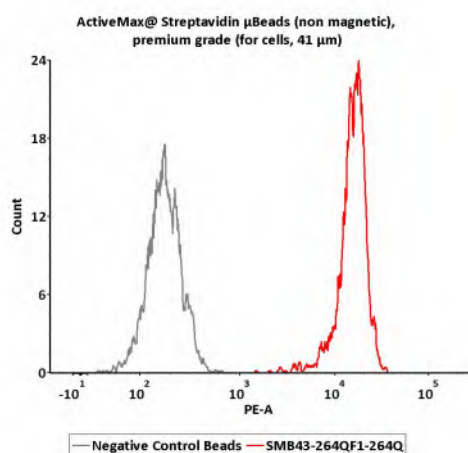
The binding capacity above in table I are obtained with representative proteins and antibodies under recommended conditions at ACROBiosystems, and the recommended usage of biotinylated molecule and reaction concentration can be used as starting coupling conditions.

Please kindly note that each biotinylated molecule itself has its specific characteristics, especially in biotinylation level and molecular weight, etc, which might result in different coupling amount and efficiency. So you need to optimize the biotinylated protein-beads ratio and the final reaction concentration of biotinylated molecules to get optimal results, before you scale up the coupling.

● Contact Information

If you have any questions, please contact our technical support team at: TechSupport@acrobiosystems.com

● **Conjugated human BCMA analyzed by FACS**



ActiveMax® Streptavidin μBeads (non magnetic), premium grade (for cells, 41 μm) coupled with protein. 60 μg of the biotinylated human BCMA protein (Cat. No. BCA-H82E4) was added to 1mg of ActiveMax® Streptavidin μBeads (non magnetic), premium grade (for cells, 41 μm) (Cat. No. MBS-C044), mix well and incubate for 60 mins at room temperature. And then the coupled μbeads were fluorescently stained using PE labeled anti-human BCMA antibody and analyzed by flow cytometry.