

Human CD3⁺ Cell Removal Beads

Cat. No.: R1522426 | Pack size: 250µL; 1mL | Storage: 2-8°C; Do not freeze

Overview

Human CD3⁺ Cell Removal Beads are generated by covalently coupling anti-human CD3 antibody to magnetic beads. They can be used for rapid and efficient removal of CD3⁺ cells from human peripheral blood mononuclear cells (PBMCs) or from red blood cell-lysed human peripheral blood white blood cells (WBCs).

Applications

Removal of CD3⁺ cells from human PBMCs or WBCs.

Beads Capacity

Beads Volume (suspension)	Total Cell Number
250 µL	5×10^8 cells
1 mL	2×10^9 cells

Protocol

When the sample is PBMC or WBC:

Prepare single-cell suspension

Count the obtained human PBMCs or human WBCs. Resuspend 1×10^8 cells in 450 µL of Isolation Buffer.

Note: Isolation buffer is PBS containing 2 mM EDTA and 2% fetal bovine serum (FBS). FBS may be replaced with 0.5% BSA or HSA. The buffer must be pre-filtered through a 0.22 µm filter.

Incubate cells with beads

Add the 450 µL cell suspension prepared in step 1 to the bottom of a 1.5 mL centrifuge tube. Then add 50 µL of washed and resuspended Human CD3⁺ Cell Removal Beads (the beads must be washed before use: select a pipette with an appropriate volume range, thoroughly resuspend the beads by pipetting, avoiding bubbles. Transfer the required volume of beads to a 1.5 mL centrifuge tube, add 1 mL of Isolation Buffer, centrifuge at 10,000 g for 1 min or use a magnetic separator for 3 min, then discard the supernatant. Add 1 mL of Isolation Buffer, wash the beads once more, and then

resuspend the beads in the same volume of Isolation Buffer as originally taken. For example, if 50 μL of beads are taken, resuspend them in 50 μL of Isolation Buffer after washing). Mix the liquid in the tube by pipetting, and incubate at room temperature for 30 min using a rotator.

Note: For other cell numbers, adjust the cell volume and the amount of Human CD3⁺ Cell Removal Beads proportionally. For fewer than 5×10^7 cells, adjust the cell suspension volume to 225 μL and add 25 μL of Human CD3⁺ Cell Removal Beads.

Magnetic separation

After incubation, add Isolation Buffer to bring the total volume to 3 mL (the liquid can be transferred from the 1.5 mL centrifuge tube to a FACS tube in several steps). Mix thoroughly by pipetting up and down 10 times (avoid vigorous shaking or inverting). Then place the FACS tube on a magnetic separator and let stand for 5 min.

Collect target cells

After magnetic separation, the target cells are in the supernatant. Carefully collect the supernatant (avoid taking up any beads), centrifuge at 500 g for 5 min, discard the supernatant, and collect the cells.

Resuspend for further use

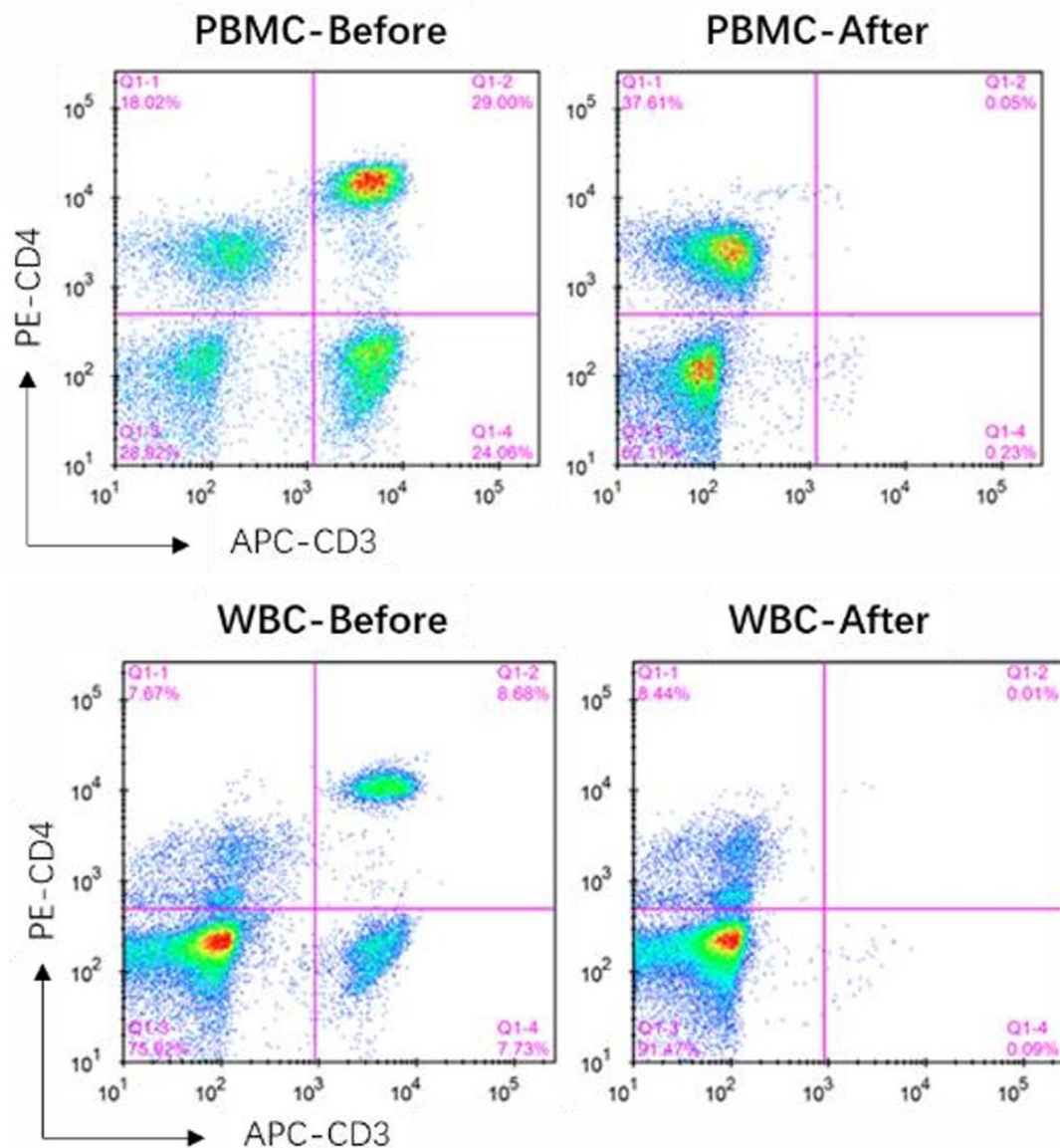
Wash the cells if required for your experiment, or centrifuge and resuspend them in the desired buffer or culture medium for subsequent molecular or cell biology experiments.

Removal Performance

CD3⁺ cells were removed from human WBCs and human PBMCs. Cells before and after removal were stained with APC anti-human CD3 antibody (clone OKT3) and PE anti-human CD4 antibody (clone RPA-T4) and analyzed by flow cytometry. The results are as follows:

WBCs: CD3⁺ cell purity before and after removal was 16.39% (mean $\pm$ SD: 19.34% $\pm$ 4.16%) and 0.1% (mean $\pm$ SD: 0.075% $\pm$ 0.04%), respectively.

PBMCs: CD3⁺ cell purity before and after removal was 53% (mean $\pm$ SD: 47.51% $\pm$ 9.67%) and 0.28% (mean $\pm$ SD: 0.42% $\pm$ 0.25%), respectively.



Precautions

Avoid freezing the beads during use and storage.

Low-retention pipette tips and centrifuge tubes are recommended to avoid loss of beads due to adsorption.

Before taking the beads, select a pipette with an appropriate volume range, thoroughly resuspend the beads by pipetting, and avoid generating bubbles during pipetting.

For research use only.

Specifications

Attribute	Value
Specifications & Purity	BioReagent
Stability and Storage	Store at 2-8°C long term (12 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.
Grade	BioReagent

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 help.

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@aladdinsci.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 kit 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 the kit 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 must be reviewed and reissued.