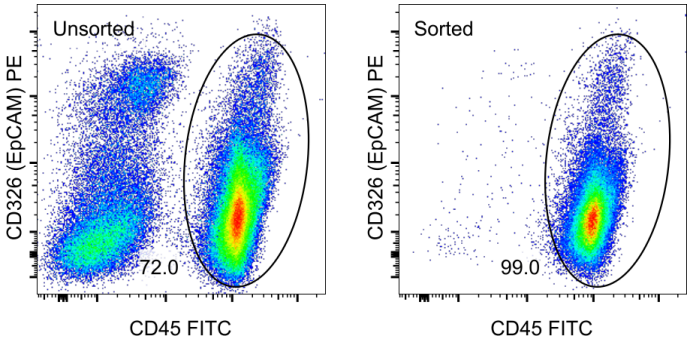
MagniSort™ Mouse CD45 Positive Selection Kit

Catalog Number: 8802-6865
RUO: For Research Use Only. Not for use in diagnostic procedures.



Cells from digested mouse lung tissue were either unsorted (left) or sorted with the MagniSort® Mouse CD45 Positive Selection Kit (right) and then stained with Anti-Mouse CD45 FITC (cat. 11-0451) and Anti-Mouse CD326 (EpCAM) PE (cat. 12-5791). Total viable cells were used for analysis.

Product Information

Contents: MagniSort™ Mouse CD45 Positive Selection Kit
REF **Catalog Number:** 8802-6865
Handling Conditions: For sorting sterile cells, perform all steps in the hood.

Formulation: aqueous buffer, 0.09% sodium azide, may contain carrier protein/stabilizer
Temperature Limitation: Store at 2-8°C. Do not freeze.
LOT **Batch Code:** Refer to vial
Use By: Refer to vial
Contains sodium azide

Description

The MagniSort® Mouse CD45 Positive Selection Kit is designed for the magnetic separation of CD45+ cells by positive selection. It has been optimized for the isolation of CD45+ cells from mouse spleens, bone marrow or digested lung tissue utilizing a biotinylated Anti-Mouse CD45 antibody and streptavidin-coated magnetic beads. CD45+ cells are bound by antibody and then magnetic beads. When placed in a magnetic field, the undesired cells can be separated from CD45+ cells by decanting.

After positive selection, the purity of selected cells can be verified by staining with Anti-Mouse CD45, clone 30-F11.

Components

MagniSort® Anti-Mouse CD45 Biotin B (cat. MS13-0451): 200 tests, 20 µL/test; store at 2-8°C.
MagniSort® Positive Selection Beads A (cat. PB-6003): 4 mL; store at 2-8°C.

Applications Reported

The MagniSort® Mouse CD45 Positive Selection Kit has been reported for use in magnetic cell separation.

Applications Tested

The MagniSort® Mouse CD45 Positive Selection Kit has been tested by magnetic cell separation followed by flow cytometric analysis of mouse splenocytes, bone marrow and digested lung tissue. A test is defined as the amount of antibody or beads to be used to stain $1x10^7$ cells in 100 µL.

This MagniSort® kit can sort $2x10^9$ total cells.

Related Products

11-0451 eBioscience™ Anti-Mouse CD45 FITC (30-F11)
12-5791 eBioscience™ Anti-Mouse CD326 (EpCAM) PE (G8.8)
MAG-4902 MagniSort™ Magnet

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invitrogen

MagniSort™ Mouse CD45 Positive Selection Protocol

Introduction

The following protocol is specifically for the MagniSort™ Mouse CD45 Positive Selection Kit to positively select CD45+ cells from splenocytes, bone marrow, or digested lung tissues. CD45+ cells are labeled with biotinylated antibodies, followed by streptavidin-coated magnetic beads. When cells are placed in the MagniSort™ magnet, CD45+ cells are held in place by the magnetic field while the undesired cells remain free in solution and can be removed by decanting.

General Notes

Caution

The MagniSort™ Magnet, 5 mL, generates a strong magnetic field. Keep away from pacemakers, credit cards, magnetic I.D. cards, watches, computer monitors and hard disks to prevent damage to these devices.

Cell preparation

1. For preparation of cell from lymphoid tissues, please refer to Best Protocols: Protocol B: Cell Preparation from Lymphoid Tissue located under the Resources Tab online.
2. For preparation of cells from non-lymphoid tissues, please refer to Best Protocols: Protocol C: Cell Preparation from Non-Lymphoid Tissue located under the Resources Tab online. It is recommended to use DNAse in the enzyme digestion cocktail and thoroughout removal of cell clumps for optimal performance in the MagniSort™ kits.
3. Addition of EDTA to buffers will reduce cell clumping.

Use in sterile cultures

1. MagniSort™ Anti-Mouse CD45 Biotin B Antibody and Positive Selection Beads contain small amounts of sodium azide as preservative. This does not interfere with cellular functions when used in conjunction with sterile buffers that do not contain sodium azide. Performance in a given assay should be determined empirically.
2. For sorting sterile cells, perform all steps in a hood and use sterile polystyrene tubes with caps and sterile buffers.

Protocol

Materials Provided

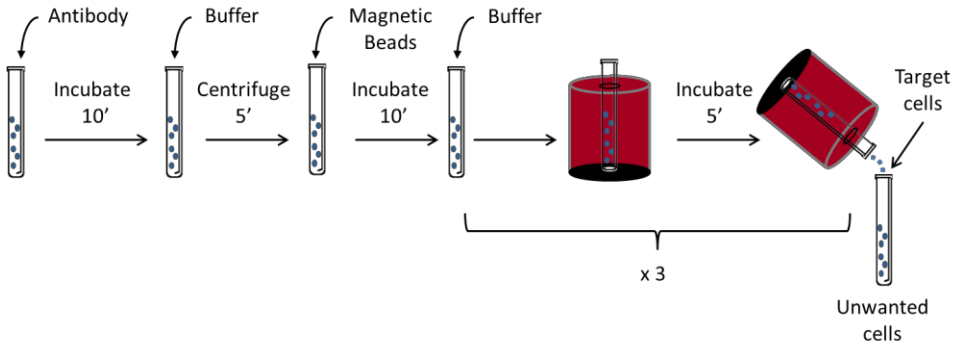
- MagniSort™ Anti-Mouse CD45 Biotin B (cat. MS13-0451), 200 tests, 20 µL/test. Store at 2-8°C.
- MagniSort™ Positive Selection Beads A (cat. PB-6003), 4 mL. Store at 2-8°C.

Additional Materials Required

- Recommended buffer for cell separation: PBS or HBSS supplemented with 3% FBS and 10 mM EDTA. Store at 2-8°C.
  Note: *We do not recommend the use of tissue culture media, such as RPMI-1640 or DMEM, for use during cell separation.*
- MagniSort™ Magnet, 5 mL
- 12 x 75 mm round bottom polystyrene tubes (5 mL, BD Falcon, cat. no. 352008, or equivalent)

Experiment Duration

- 40 minutes
- Work flow:



Experimental Procedure

1. Prepare a single-cell suspension of cells at a concentration of $1x10^7$ cells/100 µL ($1x10^8$/mL) in desired cell separation buffer.
   Note: *Cells must be in a single-cell suspension. Inspect sample and pulse vortex or pipet to remove clumps, if necessary, before proceeding.*
2. Place desired number of cells, but no more than $2x10^8$ cells, in a 12 x 75 mm, 5 mL tube.
3. Add 20 µL of MagniSort™ Anti-Mouse CD45 Biotin B per 100 µL of cells. Mix well by pulse vortexing 5 times. Incubate at room temperature for 10 minutes.
4. Wash cells by bringing the volume up to 4 mL with desired cell separation buffer and then centrifuge at 300 x *g* for 5 minutes.
5. Discard the supernatant and thoroughly resuspend the cells to their original volume with desired cell separation buffer.
   Note: *Cells must be in a single-cell suspension. Inspect sample and pulse vortex or pipet to remove clumps, if necessary, before proceeding.*
6. Add 20 µL of MagniSort™ Positive Selection Beads A per 100 µL of cells. Mix well by pulse vortexing 5 times. Incubate at room temperature for 10 minutes.
   Note: *The MagniSortTM Positive Selection Beads must be uniformly resuspended before adding to cells to ensure optimal performance. Thoroughly resuspend the beads by pipetting up and down 5 times with a P1000 pipette set to 1 mL or by vortexing.*
7. Bring the volume up to 2.5 mL with desired cell separation buffer. Mix by pipetting up and down 3 times with a P1000 pipette set to 1 mL. Avoid vortexing.
8. Insert the tube into the magnet until the bottom of the tube is touching the bench top through the hole in the bottom of the magnet. Incubate at room temperature for 5 minutes.
9. Pick up the magnet and in a continuous motion pour the supernatant into a waste or secondary receptacle; these are the undesired (unbound) cells. Hold the inverted tube for 1 second and then return it to the upright position. To maximize purity, skip Step 10 and proceed to Step 11.
   Note: *Do not blot or shake the inverted tube as this may reduce the recovery rate. The unbound cells can be collected and pooled, if needed.*
10. [Optional] For maximum recovery rate of CD45+ cells, remove the tube containing target cells from the magnet and add 1 mL of desired cell separation buffer. Wash the sides of the tube by pipetting the buffer down the sides. The positively selected cells are ready to use. Do not proceed to Steps 11-12.
11. For maximum purity of CD45+ cells, remove the tube from the magnet and repeat Steps 7-9 two more times for a total of 3 washes.
12. Remove the tube containing target cells from the magnet and add 1 mL of desired cell separation buffer. Wash the sides of the tube by pipetting the buffer down the sides. The positively selected cells are ready to use.

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Note: For SDSs for reagents and chemicals from other manufacturers, contact the manufacturer.

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