CD4 Magnetic Nanoparticles
PRODUCT DATA SHEET

CD4 Magnetic Nanoparticles

Description

CD4 magnetic nanoparticles are homogeneous and biocompatible superparamagnetic nanoparticles coated with highly specific monoclonal antibodies, which can be used for the isolation of human $CD4^+$T cells. CD4 magnetic nanoparticles are small in size, good in suspension, and specifically target CD4 positive cells. Cells bound with magnetic beads can be enriched and purified by magnetic separation, and then cells of high purity can be obtained by positive sorting or removal of CD4 cells. The separation can be completed by manual or automatic sorting equipment. Obtain high purity, high activity and good functioning human $CD4^+$T cells.

Abvigen offers high quality CD4 magnetic nanoparticles. The product has high repeatability between batches, which can meet the needs of various customers for personalized materials such as research and development, testing and production.

For custom sizes, formulations or bulk quantities please contact our customer service department.

Website: www.abvigen.com Phone: +1 929-202-3014 Email: info@abvigenus.com

Characteristics

Type: CD4 Magnetic Nanoparticles

Surface group: Anti-CD4

Dispersing solvent: Preservative solution

Size: 2 mL

Storage condition: Store at 2-8°C away from light to avoid freezing.

Operation Case

Material preparation

1. Magnetic sorting column and magnetic field (magnetic sorting rack);
2. Separation buffer: 0.01 M PBS+0.5% BSA+ 2 mM EDTA, pH=7.2, refrigerated at 2-8°C for use;
3. Gently mix CD4 nanobeads before use.

Cell preparation

1. When human peripheral blood is used as the isolation sample, peripheral blood mononuclear cells (PBMC) should be isolated using lymphocyte isolation solution;

2. Resuspension PBMC with separation buffer to 1×10^7 PCS /mL, refrigerated at 2-8°C for use.

Magnetic separation

Take a single isolation of 1×10^7 cells as an example:

1. Centrifuge the prepared cell suspension at 300 g for 10 min and discard the supernatant;

2. The cells were precipitated and suspended in 80 μL separation buffer, and 20 μL CD4 nanobeads were added, thoroughly mixed, and incubated at 2-8°C for 15 min.

3. After incubation, add 1 mL separation buffer, centrifuge 300 g for 10 min, discard the supernatant, and re-suspend the cells with 1 mL separation buffer;

4. Place the magnetic sorting column in the magnetic field, add 1 mL separation buffer to wash, and add the cell suspension incubated by CD4 nanoparticle into the magnetic sorting column;

5. When the liquid in the magnetic sorting column flows out, the separation buffer is added twice, adding 1 mL each time, and all the effluent is collected. The effluent is the PBMC that removes $CD4^+$T cells;

6. Remove the magnetic sorting column from the magnetic field, place it on a suitable collection tube, add 1 mL separation buffer to the magnetic sorting column, and use a push rod to flush out the cells trapped in the sorting column, namely $CD4^+$T cells.

Note:

(1) The number of cells isolated in a single time is recommended to be no more than 1×10^7, and when a higher number of cells is used, the amount of reagents and the total volume of the reaction should be increased accordingly;

(2) Keeping the cells operating at 2-8°C can effectively reduce non-specific binding;

(3) The purity of target cells can be improved by using the new magnetic sorting column.

Advantages

Small size

Good suspension

Applications

The isolation of human $CD4^+$T cells

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Storage

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Ordering Information

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