Anti-FITC Magnetic Nanoparticles
PRODUCT DATA SHEET

Anti-FITC Magnetic Nanoparticles

Description

Anti-FITC magnetic nanoparticles are composed of superparamagnetic nanoparticles with uniform size and good biocompatibility coated with highly specific anti-FITC antibodies, which can magnetically label and magnetically separate FITC-labeled cells or other substances. For example, FITC-labeled antibodies, peptides or ligands bind to cell surface markers, and anti-FITC nano-magnetic beads can bind to FITC molecules on the cell surface to achieve target cell capture through negative or positive sorting. Specifically, when passing through the magnetic separation column in the magnetic field, the cells labeled by magnetic beads remain in the separation column, and the unlabeled cells flow out. The magnetic field was removed, the buffer was added, and the cells labeled with magnetic beads were eluted. The target cells were obtained after positive or negative sorting by anti-FITC magnetic nanoparticles, which could be further analyzed by flow cytometry.

Abvigen offers high quality anti-FITC 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: Anti-FITC Magnetic Nanoparticles

Surface group: Anti-FITC

Dispersing solvent: Preservative solution

Size: 2 mL

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

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Operation Case

Material preparation

1. Magnetic sorting column and magnetic field (magnetic sorting rack);

2. Fitc-labeled antibodies;

3. 0.01 M PBS, pH=7.2, refrigerate at 2-8°C for later use;

4. Separation buffer: 0.01 M PBS+0.5% BSA+ 2 mM EDTA, pH=7.2, refrigerated at 2-8°C for use;

5. Gently mix the anti-FITC nano magnetic beads before use.

Cell preparation

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

2. When tissue is used as the separation sample, it should be treated into single-cell suspension according to the corresponding method;

3. The above cells were suspended with separation buffer to 1×10^8 cells /mL and refrigerated at 2-8°C for later use.

Magnetic separation

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

1. 100 µL of the prepared cell suspension was taken into a 2 mL centrifuge tube, appropriate amount of FITC labeled antibody was added, mixed, and incubated at 2-8°C.

Note: For the dosage and incubation time of FITC labeled antibody, please refer to the relevant antibody instructions to ensure the best use effect.

2. Add 1 mL PBS into the cell suspension, mix well, centrifuge 300 g for 10 min, discard the supernatant;

3. Add 80 µL separation buffer to the suspension cells, then add 20 µL anti-FITC nano-magnetic beads, and fully mix and incubate at 2-8°C for 15 min;

4. After incubation, add 1 mL separation buffer, centrifuge 300 g for 10 min, discard supernatant, and re-suspend cell precipitation with 1 mL separation buffer;

5. The magnetic sorting column (washed once with 1 mL separation buffer before use) was placed in the magnetic field, and the cell suspension after incubation with anti-FITC nano magnetic beads was added;

6. Negative separation: After the liquid in the magnetic separation column flows out naturally, the separation buffer is added twice, adding 1 mL each time, and all the outflow is collected. The cells in the effluent were the target cells that were not labeled with anti-FITC nanobeads.

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7. Positive sorting: Remove the magnetic sorting column from the magnetic field, place it on a suitable collection tube, absorb 1 mL separation buffer to add to the magnetic sorting column, and wash out the cells trapped in the sorting column with a push rod, that is, the target cells labeled with anti-FITC nano-magnetic beads;

8. The collected target cells can be used for relevant detection or directly for downstream experiments.

Note:

(1) The number of cells isolated in a single time is recommended to be no more than 1×10^7. 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.

Applications

Magnetically label and magnetically separate FITC-labeled cells or other substances.

Storage

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

Ordering Information

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