Absolute Mag™ Anti-Rabbit IgG Magnetic Particles, Fluorescent, 200-500 nm

Cat.No: WHM-N045

DESCRIPTION

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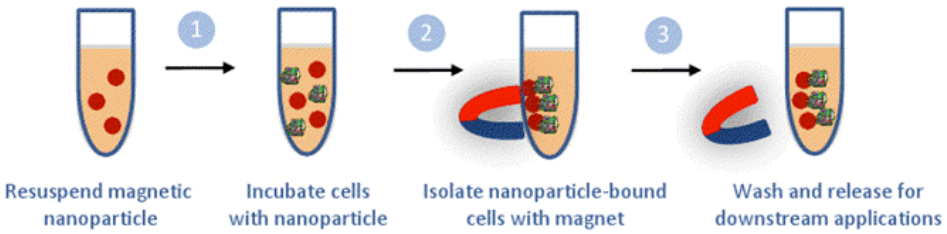
Absolute Mag™ Anti-Rabbit IgG Magnetic Particles, Fluorescent, 200-500 nm are unique combination of superparamagentic iron oxide and quantum dots providing high magnetic moment and bright stable fluorescence, ideal for controllable magnetic manipulation with extensive, multiplexed fluorescence imaging. Absolute Mag™-anti-rabbit IgG fluorescent magnetic particles can universally bind to rabbit IgG. Their maximal fluorescence emission is at 635 nm when excited at 488 nm or shorter wavelength. Absolute Mag™-anti-rabbit IgG fluorescent magnetic particles or the downstream complex is easy to be separated using a magnet.



Absolute Mag™-anti-rabbit IgG magnetic particles are ideally used together with rabbit antibody for isolation or labeling of cells (e.g. CTCs, stem cells) from a mixture of cell population obtained from tissues or organs. The isolated cells are tagged with strong fluorescence and can be directly applied for microscope imaging or other fluorescence-based cell analysis. The isolated cells are also viable and can be further cultured or used for downstream molecular analysis such as mRNA isolation and RT-PCR. Cell separation with Absolute Mag™ magnetic particles eliminates the use of columns, so cells are not exposed to the mechanical stress from passing through the column matrix. Magnetically separated cells are highly purified and retain their viability, ideal for downstream applications

KIT COMPONENTS

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- Absolute Mag™-Anti-Rabbit IgG Magnetic Particles, Fluorescent (Cat# WHM-N045) are provided in phosphate buffered saline (PBS), pH 7.4, with 0.02% BSA. Each vial contains 1 ml of solution with particle concentration of 1 mg/ml.
- Nanoparticle size: 200-500 nm measured using Dynamic Light Scattering.
- Polydispersity index <0.2
- Washing Buffer: 15 ml

STORAGE

Storage Condition

All materials except the magnet should be stored at 4°C. When stored as specified the product is stable for six months.

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GENERAL PROTOCOL

Cell Enrichment

This protocol provides a general guidance for enriching 10^5 cells using Absolute Mag™-Anti-Rabbit IgG Magnetic Particles, Fluorescent . Please adjust the amount of reagents for specific application.

1. Gently vortex or pipette the Absolute Mag™-Anti-Rabbit IgG magnetic particles in the vial for 10-20 seconds before use.
2. Aliquot 50-100 µl particle solution (for ≤10 µg antibody).
3. Separate the magnetic particles from the solution by placing the magnet on the side of the tube for 2-5 min and remove the supernatant carefully (with magnet still on the side).
   Note: *A clear precipitate containing dark brown colored particles should become visible on the side of the microcentrifuge tube.*
4. Remove magnet and wash the particles with 100 µl 1X Washing Buffer. Repeat step 4, and remove supernatant.
5. Add 100 µl sample solution containing desired antibodies to the particle pellet, mix well, and incubate with gentle rotation for 2 hours at room temperature or 4 °C overnight.
6. After incubation, use the magnet to separate particle-antibody complex from the solution and remove the supernatant.
7. Wash particle-antibody complex with 100 µl Washing Buffer twice and remove supernatant to remove unbound antibody.
8. Aliquot 50-100 µl particle-antibody solution and add it to the cell sample to a total volume of 0.1-0.5 ml.
   Note: *50 µl is generally sufficient for the enrichment of 1-10x10^5 cells. Cell capture efficiency can be affected by factors such as frequency of target cells in the cell population, density of antigen/epitope expressed on the cell surface, and the antibody affinity. Adjust the amount of particles accordingly.*
9. Incubate the particles with the cell sample on an orbital shaker for 30 minutes at room temperature.
10. After incubation, use a magnet to separate the particles (with bound cells) from the solution, and carefully remove the supernatant.
11. Wash the particle-cell complex with 500 µl cell culture medium twice.
12. Isolated cells can be re-suspended in cell culture medium for downstream applications.