Absolute Mag™ Anti-EpCAM Magnetic Particles Conjugation kit, 200-500 nm

Cat.No: WHM-N043K

DESCRIPTION

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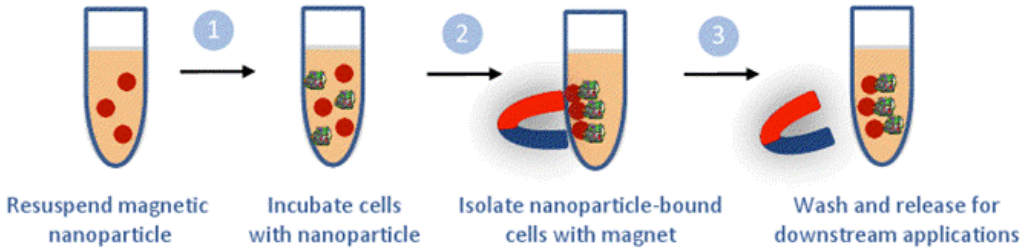
Absolute Mag™ Anti-EpCAM Magnetic Particles are ideal for epithelial tumor cell enrichment for cellular or molecular analysis. Absolute Mag™ Anti-EpCAM recognizes and efficiently binds to human epithelial cells following a short incubation. The generated nanoparticle-cell complex can be separated from the rest of the sample by magnet. The cells can be detached from the beads with the Release Buffer supplied.



Absolute Mag™ Anti-EpCAM enables high recovery of high-purity and viable cells for use in further downstream molecular or cellular assays. The beads bound cells can be lysed for further protein or nucleic acid purification. Absolute Mag™ nanoparticles are much smaller than conventional micro-beads. This feature allows for better accessibility of the nanoparticles to the antigenic epitope on cell surface. In addition, the surfaces of Absolute Mag™ nanoparticles are uniquely coated to reduce non-specific interactions with non-targeted cells.

KIT COMPONENTS

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- Absolute Mag™ Anti-EpCAM Magnetic Particles Conjugation Kit (Cat# WHM-N043K) are provided in phosphate buffered saline (PBS), pH 7.4. Each vial contains 1 ml of solution with a particle concentration of 1 mg/ml.
- Use 12.5 µl of beads to capture 100-500,000 cells. Customers are suggested to titrate beads quantity vs. cell sample quantity to optimize cell separation.
- Cell Separation Buffer 10ml

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 cells using Absolute Mag™ Anti-EpCAM Magnetic Particles. Please adjust the amount of reagents for specific application.

1. Gently vortex or pipette the Absolute Mag™ Anti-EpCAM magnetic particles in the vial before use. Suggest to use 25 µl nanoparticle solution for enrichment experiment.
   Note: *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 nanoparticles accordingly.*
2. Optional: Wash nanoparticles with 100-500 µl PBS Buffer or Cell Separation Buffer once. Separate the nanoparticles 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).
3. Dilute whole blood with equal volume of PBS with 4 mM EDTA. Add the nanoparticles to the whole blood and incubate on an orbital shaker for 1-2 hr at 4°C. (Suggest to use 12.5 µl beads for 1 ml of blood).
4. After incubation, use a magnet to separate the nanoparticles (with bound cells) from the solution, and carefully remove the supernatant.
   Note: *Adjust the time period used for pulling beads on a magnet based on the volume. For 1 ml, recommend 5 min. For more than 5 ml, recommend 20-30 min.*
5. Wash the nanoparticle-cell complex with 500 µl of PBS buffer, Cell Separation Buffer, or cell culture medium twice.
6. Isolated cells can be re-suspended in cell culture medium for downstream applications.