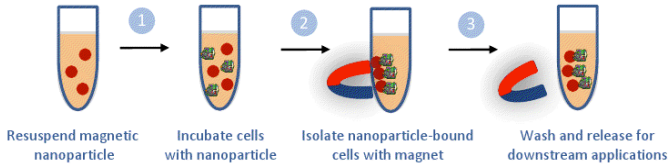
MagVigen™ - Anti-EpCAM, Human Nanoparticles
Cat # 51001/K51001 sample

Product Description

MagVigen™ - Anti-EpCAM nanoparticles are ideal for epithelial tumor cell enrichment for cellular or molecular analysis. MagVigen™ 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.



MagVigen™ - 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. MagVigen™ 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 MagVigen™ nanoparticles are uniquely coated to reduce non-specific interactions with non-targeted cells.

Product Contents

- Cat # 51001: MagVigen™ - Anti-EpCAM nanoparticles 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 ul of beads to capture 100-500,000 cells. Customers are suggested to titrate beads quantity vs. cell sample quantity to optimize cell separation.

Cat# K51001 further includes:

- Cell Separation Buffer 10ml

All materials except Magnet should be stored at 4°C.

Shelf life: 6 months.

Protocol

This protocol provides a general guidance for enriching cells using MagVigen™- Anti-EpCAM. Please adjust the amount of reagents for specific application.

1. Gently vortex or pipette the MagVigen™- Anti-EpCAM nanoparticles 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 4mM 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 ul 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.