

## INTENDED USE

The MagCollect™ Streptavidin Ferrofluid (SAV-FF) is a colloid of magnetic nanoparticles conjugated to streptavidin. MagCollect™ SAV-FF is optimized for the isolation of specific cell populations via negative or positive selection using R&D Systems MagCollect™ Magnet (R&D Systems, Catalog # MAG997).

## BACKGROUND

R&D Systems MagCollect™ products are designed for the isolation of cells in a "liquid phase". MagCollect™ technology is based on the use of ferrofluids or magnetic nanoparticles that have no magnetic memory (superparamagnetic) and behave like colloidal particles. This feature allows the ferrofluids to remain in solution without the need for mixing and additionally allows for efficient diffusion kinetics during the binding reaction. The proprietary manufacturing technology of MagCollect™ Ferrofluids generates particles with higher ligand binding capacity per mass compared to many other larger diameter magnetic particles.

## PRINCIPLE OF SELECTION

A mononuclear cell suspension is first incubated with a biotinylated antibody from any species or with a cocktail of biotinylated antibodies which target specific cell population(s). MagCollect™ Streptavidin (SA) Ferrofluid is next added to the reaction that allows the SA coated nanoparticles to interact with the cells tagged with the monoclonal antibodies. The tube containing the cell suspension is then placed within a magnetic field. Magnetically tagged cells will migrate toward the magnet, leaving the untagged cells in suspension in the tube. The cells in suspension (negatively selected cells) and the magnetically trapped cells on the wall of the tube (positively selected cells) may be individually harvested depending on the desired target cell population. The enriched cell preparation is then available for a variety of applications including tissue culture, immune status monitoring and flow cytometry.

## MATERIALS PROVIDED & STORAGE CONDITIONS

Store the unopened kit at 2-8 °C. **DO NOT FREEZE.**

This kit contains sufficient reagents to process 1 x 10<sup>9</sup> total cells.

PART	PART #	DESCRIPTION	STORAGE OF OPENED/DILUTED MATERIAL
MagCollect Streptavidin Ferrofluid	860038	1.0 mL of a solution containing BSA and preservative.	May be stored at 2-8 °C when handled aseptically.*

\* Provided this is within the expiration date of the kit.

## OTHER SUPPLIES REQUIRED

- MagCollect Magnet (R&D Systems, Catalog # MAG997) or equivalent
- Phosphate buffered saline supplemented with 0.5% BSA, 2 mM EDTA, and preservative (R&D Systems, Catalog # 895921)
- 12 x 75 mm (5 mL) polystyrene round bottom tubes
- Sterile Pasteur pipettes or transfer pipettes

## PRECAUTION

Some components of this kit contain sodium azide, which may react with lead and copper plumbing to form explosive metallic azides. Flush with large volumes of water during disposal.