



Flow Cytometry Reagents

Streptavidin-Phycoerythrin

Catalog Number: F0040

Lot Number: AEDQ01

100 Tests

Reagents Provided

Streptavidin-Phycoerythrin: Supplied as 25 µg SA-PE in 1 mL saline containing up to 0.5% BSA and 0.09% sodium azide.

Intended Use

Used as a secondary reagent in immunofluorescent assays using biotinylated primary labeling reagents. This product has been optimized for use with monoclonal antibody-biotin reagents.

Background Information

Streptavidin, a protein of 55,000 Daltons, is derived from *Streptomyces avidinii* and can bind 4 moles of biotin per mole of protein. The dissociation constant for biotin is approximately 10^{-15} M. The streptavidin-biotin complex is stable over a wide range of pH and temperatures. Streptavidin lacks carbohydrate residues present in the avidin molecule. This tends to reduce non-specific interactions with surface molecules and, therefore, streptavidin is preferred over avidin in many immunologic assays. Streptavidin can be covalently conjugated to fluorescent dyes and then used as a developer where the primary reagent was biotinylated.

Reagent Preparation

Streptavidin-Phycoerythrin (SA-PE) is produced as the R-phycoerythrin derivative of streptavidin. SA-PE is provided in a ready-to-use liquid format containing up to 0.5% BSA and 0.09% sodium azide. R-Phycoerythrin has an absorption spectrum from 480 - 566 nm and has optimal emission at 575 nm. Store reagent at 2° - 8° C. **DO NOT FREEZE.** Reagent is stable for at least 6 months after purchase.

Sample Staining

Ten µL of Streptavidin-Phycoerythrin is added to a maximum of 1×10^6 cells in 100 - 200 µL that have been optimally stained previously with a biotinylated primary reagent. The reaction is then allowed to proceed another 30 - 45 minutes at 2° - 8° C **in the dark**. The cell mixture is then washed twice with 10 mM PBS. The final cell pellet is resuspended in 200 - 300 µL of 10 mM PBS for flow cytometric analysis. SA-PE stained cells should be kept in the dark if storage is required prior to flow cytometric analysis.

N.B. Contains sodium azide as a preservative - sodium azide may react with lead and copper plumbing to form explosive metal azides. Flush with large volumes of water during disposal.