FT-77776A

Phycobiliprotein - Streptavidins

Secund-step immunochemical to use in immunoassays using biotinylated probes and fluorescent detection.

Products Information

Product name cat.number	$\lambda_{exc}\backslash\lambda_{em}$. max. (nm)	mol. abs. ($M^{-1}cm^{-1}$)	Quatum Yield
R-PhycoErythrin - Streptavidin FP-777760, 0.5mg (lyo. 1mg/ml) FP-77776A, 1mg (lyo. 1mg/ml)	565 / 575	$1.96x10^6$	0.84
AlloPhycoCyanin.XL - Streptavidin FP-79235A, 0.5mg (1mg/ml) FP-79235A, 1mg (1mg/ml)	561 / 662	$7.00x10^5$	0.68

These labeled streptavidins are provided lyophilized at 1.0 mg/ml in a buffer consisting of 100 mM Sodium phosphate, pH 7.2, and 0.09% of Sodium Azide. Concentration is based on total protein content.

Storage: -20°C (Lyophilized) – once in solution keep at +4°C, do not freeze.

Technical information

Streptavidin binds biotin ligand with extremely high affinity.

R-PhycoErythrin is among the best dyes currently available for applications that require high sensitivity and simultaneous multicolor detection. RPE can be excited at 488 nm light (absorbance max 566 nm) leads to a red-orange light with an emission maximum at 575 nm. Streptavidin RPE is thus widely used in FlowCytometry and MicroArraying, combined to FITC labels that can be excited with the same light source than PE.

The **allophycocyanin** dye is brighter and more photo-stable than the spectrally similar Cy5 conjugates. APC excitation range from 595 to 647nm, with absorbance maximum at 651nm, and emits fluorescence between 640 and 680 nm (maximum at 662 nm). Streptavidin APC is thus widely used in FlowCytometry combined with other labels for dual, triple and even quadruple color detections.

The **Phycobiliprotein – Streptavidins conjugates** are useful second-step reagents for staining with biotinylated probes as an avidin/biotin labeling system with fluorescente detection, notably for Microarray, Flow Cytometry, FIA and Immuno-histochemistry.

Guidelines for use

Storage and preparation of solution:

Upon receipt, store the lyophilized powder at <-15°C, and kept from light and moisture.
When ready to use, add ddH2O with 0.1% bovine serum albumin into the vial to have 1mg/mL stock solution. This reconstituted solution remains stable for two months without significant change when stored in the presence of 2 mM sodium azide and kept from light at 4°C. Store reconstituted conjugates at 2-6°C (DO NOT FREEZE).

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FCM, IF and MicroArray detections

- Mix well streptavidin reagent before use. For maximal recovery of contents, please quick-spin vial before opening. Dilute only prior to immediate use.

- Prepare a working solution by appropriate dilution in PBS BSA 0.1% or any other buffer suitable for immunoanalysis.

Note: The appropriate dilution should be determined for each individual application.
As a general guideline dilutions of **1:100 to 1:500** should be suitable for most applications.

Streptavidin R-Phycoerythrin was used as staining reagent by using 1 µl of the conjugate to stain 1×10^6 cell suspended in a volume of 0.1 ml for flow cytometry analysis.

- The working solution should be incubated in the assay according your standard protocol, usually 30min – 1h.

- Wash the cells, slides or microplates wells.
Stained cells are typically washed with PBS + 0.1% BSA (FCM, IF).
Stained microplates are typically washed with PBS + Tween™20 0.05%.

- Read fluorescence with a Flow cytometer, a microscope or a microplate reader equipped with suitable light source and filters:

R-Phycoerythrin can be **excited at 488 nm (Argon laser)** and its emission is **read in the red-orange area** (emission approx.. maximum at 575 nm).

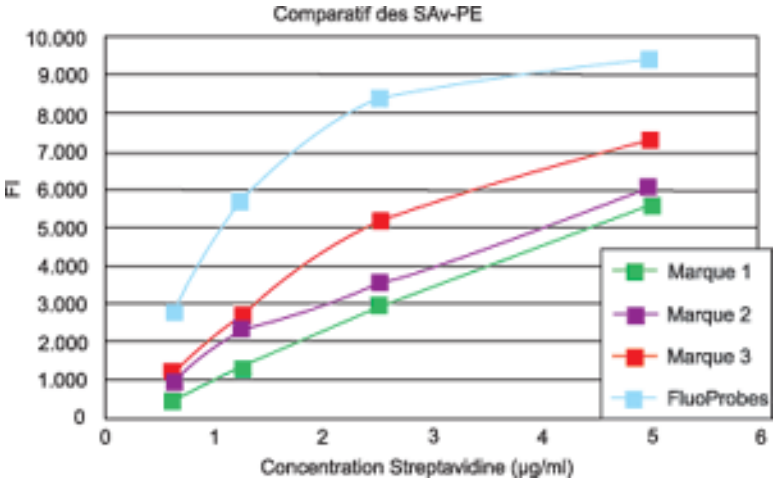
Allophycocyanin can be **excited at 633 nm (He-Ne laser) or 647 nm (Ar-Kr laser)**. The excitation range from 595 to 647, with absorbance maximum at 651nm. It's fluorescence is read **between 640 and 680 nm** (emission maximum at 662 nm).

Technical information

FluoProbes streptavidin-R-PE is a high quality reagent.

*Comparison in a immunometric assay.

FluoProbes® Streptavidin-RPE was compared with several other competitors in a capture-sandwich assay. The fluorescent intensity that could be performed was obtained using Biotin-coated wells reacted with Streptavidin-PE. Data was generated in excitation at 544 nm and measuring fluorescence at 590 nm from FIA reader (ThermoLabsystems). Data are representative of means of three independent experiments.



*FlowCytometry analysis

	% gated	Mean
Negative control		
FluoProbes	0.56	
Competitor 1	0.78	
Competitor 2	0.71	
0.3 µg of streptavidin R-PE		
FluoProbes	**49.71**	**164.84**
Competitor 1	44.35	64.82
Competitor 2	30.25	67.79
0.03 µg of streptavidin R-PE		
FluoProbes	46.68	**95.85**
Competitor 1	46.95	76.12
Competitor 2	45.81	84.08

Disclaimer : Materials from FluoProbes® are sold **for research use only**, and are not intended for food, drug, household, or cosmetic use. FluoProbes® is not liable for any damage resulting from handling or contact with this product.

Related products

Fluorescein (widely used in double labeling with PE). We recommend our superior alternative FluoProbes® 488 label available in many conjugates and formats, including:

FluoProbes 488	**-SE**	FP-BA6800
	-COOH	FP-BA6790
	-Streptavidin	FP-BA2221
	Protein Labeling kit	FP-BE3750

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