



Product Data Sheet

Product Name: HiLyte™ Fluor 488 acid, SE

Size: 5 mg

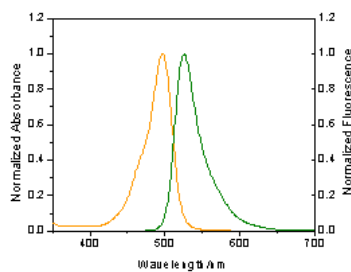
Catalog Number: AS-81161

Molecular Weight: 698.6

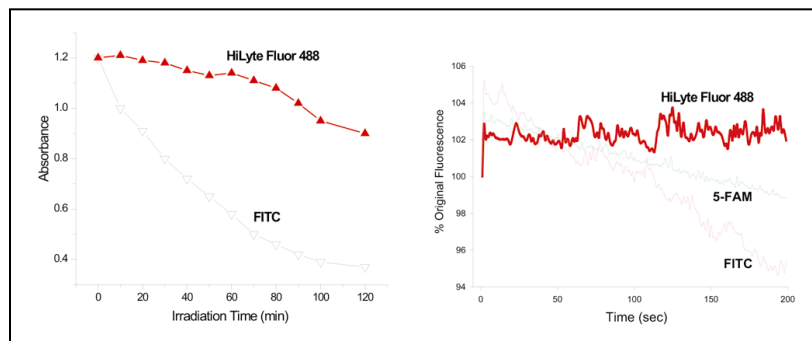
Solvent: DMF or DMSO

Product Description: FITC, the most popular fluorescent labeling dye for preparing green fluorescent bioconjugates, has its limitations, such as severe photobleaching in microscopy imaging and pH sensitivity. However, protein conjugates prepared with HiLyte™ Fluor 488 dyes (Ex/Em=497 nm/525 nm) are far more superior to conjugates of FITC. HiLyte™ Fluor 488 conjugates are significantly brighter than fluorescein conjugates and are much more photostable. Extinction coefficient is $70,000 \text{ M}^{-1}\text{cm}^{-1}$, with a quantum yield of 0.91. Additionally, the fluorescence of HiLyte™ Fluor 488 is not affected by pH (working pH range is 4-10). This pH insensitivity is a major improvement over fluorescein, which emits its maximum fluorescence only at pH above 9.

Spectra: Maximum Ex/Em wavelength is 502/527 nm.

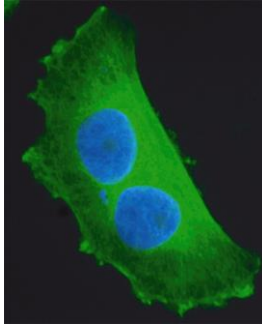


Photostability: HiLyte™ Fluor488, 5-FAM and FITC photostability over time



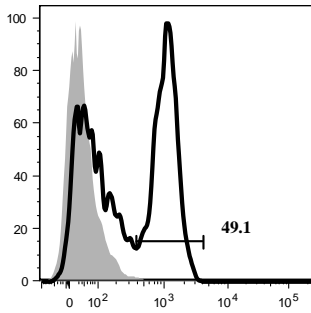
Application:

Immunofluorescence staining with HiLyte™ Fluor 488 conjugated rabbit anti-mouse IgG (cat# [AS-28164-H488](#))



Tubulin in human glioblastoma cells was probed with mouse anti-tubulin, visualized with HiLyte™ Fluor 488-conjugated rabbit anti-mouse IgG (Cat# [AS-28164-H488](#)). Nuclei were stained with Hoechst 33342 (Cat# [AS-83218](#)).

Flow cytometry analysis with HiLyte™ Fluor 488 labeled secondary antibody



Human PBMC cells were stained with anti-CD3 mAb (0.9 mg/ml) at 1:500 dilution. Secondary antibody goat anti-mouse IgG labeled with HiLyte™ Fluor 488 at 0.5 mg/ml (cat# [AS-61057-H488](#)) was used at 1:200 dilution. Filled histogram: secondary antibody staining only control.

Stock solution preparation: Make 10 mg/ml of dye stock solution (14 mM) in high quality anhydrous DMSO. Completely dissolve all dye content by vortexing. Dye solution should be prepared fresh immediately before an experiment. Extensive storage of the dye solution may reduce dye activity. Any solution containing the dye should be protected from light.

Shelf life and storage: Shelf life is two years if stored at -20C, desiccated and protected from light.

Related Products:

Catalog#	Product Name
AS-81160	HiLyte™ Fluor 488 acid
AS-81162	HiLyte Fluor™ 488 amine, TFA Salt
AS-81163	HiLyte Fluor™ 488 hydrazide
AS-81164	HiLyte Fluor™ 488 C2 maleimide
AS-72047	AnaTag™ HiLyte Fluor™ 488 Protein Labeling Kit
AS-72048	AnaTag™ HiLyte Fluor™ 488 Microscale Protein Labeling Kit
HiLyte™ Fluor 488 labeled Secondary Antibodies & Streptavidin	

This product is for *in vitro* research use only.