



Product Data Sheet

Product Name: HiLyte™ Fluor 647 acid, SE

Size: 1 mg

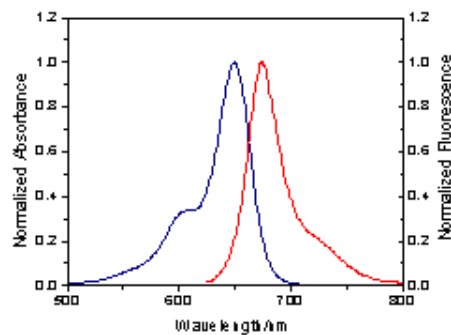
Catalog Number: AS-81256

Molecular Weight: 1302.71

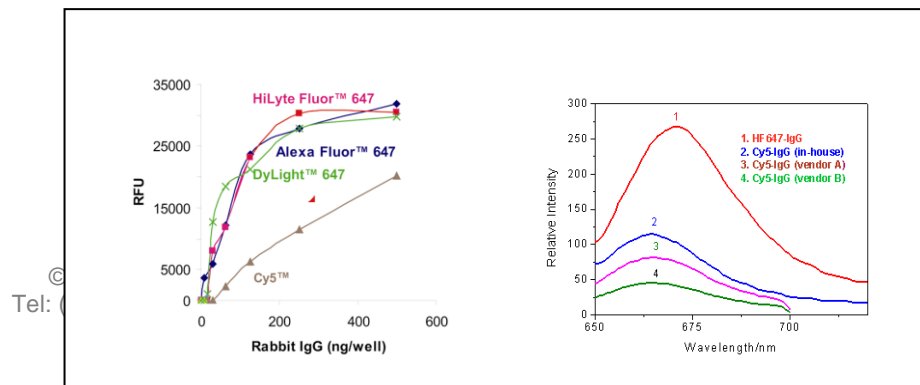
Solvent: DMF or DMSO

Product Description: HiLyte™ Fluor 647 acid, SE is an excellent fluorescent labeling dye. HiLyte™ Fluor 647-Protein conjugates are only slightly red-shifted compared to those of Cy5™ dyes, resulting in an optimal match to filters designed for Cy5™ dyes. In side-by-side comparison of antibody conjugates of HiLyte™ Fluor 647 dyes and Cy5™ conjugates (supplied by other companies), the total fluorescence of HiLyte™ Fluor 647 labeled secondary antibodies is significantly higher than that of Cy5™ conjugates. Extinction coefficient is $250,000 \text{ M}^{-1}\text{cm}^{-1}$, with a quantum yield of 0.33. Unlike Cy5™ dyes, HiLyte™ Fluor 647 dyes have very little change in absorption or fluorescence spectra when conjugated to most proteins, oligonucleotides and nucleic acids, thus yielding greater total fluorescence at the same degree of substitution. Additionally, our in-house data indicated that HiLyte™ Fluor 647 is superior to Cy5™ in fluorescence polarization-based assays.

Spectra: Maximum Ex/Em wavelength is 649/674 nm.

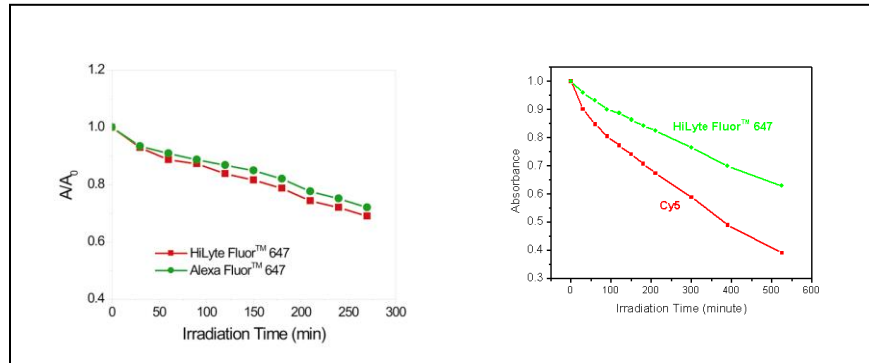


Flourescence intensity: Performance of dye-goat anti-rabbit IgG conjugates



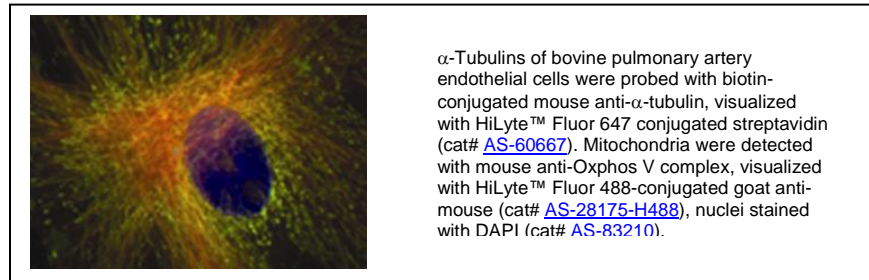
Photostability:

HiLyte™ Fluor, Alexa Fluor™ 647 and Cy5™ photostability over time

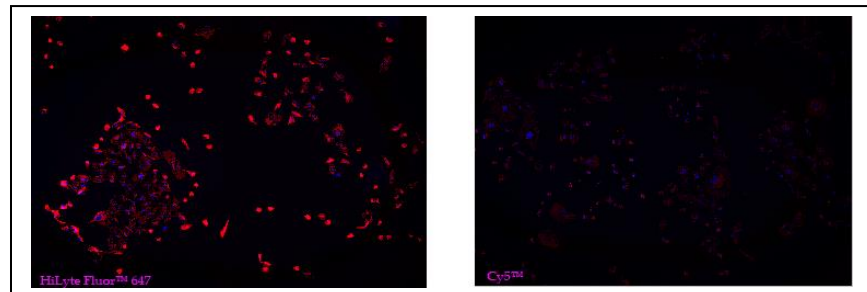


Application:

Immunofluorescence staining with HiLyte™ Fluor 647 conjugated streptavidin (cat# [AS-60667](#)) and HiLyte™ Fluor 488-conjugated goat anti-mouse (cat# [AS-28175-H488](#))



Immunofluorescence staining with HiLyte™ Fluor 647 (left panel) or Cy5™ (right panel) labeled secondary antibodies. 3T3 cells incubated with anti-tubulin antibody and goat-anti-rabbit antibodies, labeled either with HiLyte™ Fluor 647, or Cy5™, nuclei were stained with Hoechst 33342 (cat# [AS-83218](#)).



Stock solution preparation: Make 10 mg/ml of dye stock solution (7.5 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-81255 | HiLyte™ Fluor 647 acid |
| AS-81257 | HiLyte™ Fluor 647 amine |
| AS-81258 | HiLyte™ Fluor 647 hydrazide |
| AS-81259 | HiLyte™ Fluor 647 C2 maleimide |
| AS-72049 | AnaTag™ HiLyte™ Fluor 647 Protein Labeling Kit *Ultra Convenient* |
| AS-72050 | AnaTag™ HiLyte™ Fluor 647 Microscale Protein Labeling Kit |
| | HiLyte™ Fluor 647 labeled Secondary Antibodies & Streptavidin |

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