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sulfo-Cyanine5-PEG3-biotin

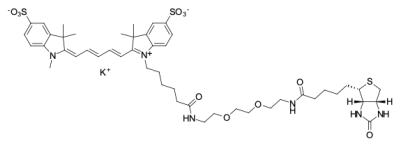
http://www.lumiprobe.com/p/sulfo-cy5-peg3-biotin

sulfo-Cyanine5 is a far-red fluorophore widely used for biomolecule labeling, with excitation maximum at 646 nm and emission maximum at 662 nm. Far-red fluorescent tags with excitation above 600 nm and emission further than 650 nm are valuable for imaging techniques because of the lower background autofluorescence at these wavelengths. Besides, far-red fluorescent labels can be imaged simultaneously with near-red, orange, green, and blue tags, which is advantageous for multicolor imaging.

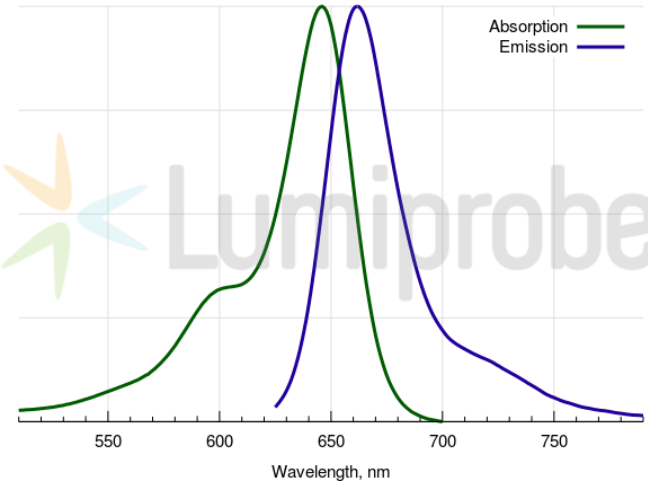
Biotin, or the water-soluble vitamin H, is well known not only for playing essential roles in various crucial metabolic cellular reactions but also for its extremely high affinity for avidin, a glycoprotein of egg white. Avidin, streptavidin (bacterial analogue of avidin), and neutravidin (deglycosylated avidin) bind non-cooperatively to biotin with high affinity. Thus, sulfo-Cyanine5 biotin conjugate can be used for detecting and quantifying biotin binding sites of avidin, streptavidin, and neutravidin in samples of different origin.

sulfo-Cyanine5 biotin conjugate is a water-soluble reagent and its fluorescence is pH independent from pH 4 to pH 10. A flexible PEG3 linker between biotin moiety and fluorescent tag provides binding to avidin, streptavidin, or neutravidin without steric troubles.

The major applications of sulfo-Cyanine5 biotin conjugate include imaging (e.g. primary and secondary antibody labeling for Western Blotting, immunoassay, cyto- and histochemistry, flow cytometry), affinity and dissociation constant measuring, streptavidin-based sensors, etc.



Structure of sulfo-Cyanine5-Biotin conjugate



Absorption and emission spectra of sulfo-Cyanine5

General properties

Appearance:	dark blue solid
Molecular weight:	1037.36
Molecular formula:	$C_{48}H_{65}N_6KO_{11}S_3$
Solubility:	good in water, DMF, DMSO
Quality control:	NMR ^1H, HPLC-MS (95%)
Storage conditions:	Storage: 24 months after receival at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Avoid prolonged exposure to light. Desiccate.
Legal statement:	This Product is offered and sold for research purposes only. It has not been tested for safety and efficacy in food, drug, medical device, cosmetic, commercial or any other use. Supply does not express or imply authorization to use for any other purpose, including, without limitation, in vitro diagnostic purposes, in the manufacture of food or pharmaceutical products, in medical devices or in cosmetic products.

Spectral properties

Excitation/absorption maximum, nm:	646
ε, $L \cdot mol^{-1} \cdot cm^{-1}$:	271000
Emission maximum, nm:	662
Fluorescence quantum yield:	0.28
CF_{260}:	0.04
CF_{280}:	0.04