

sulfo-Cyanine5-PEG3-biotin

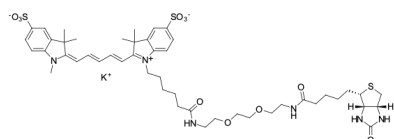
<http://www.lumiprobe.com/p/sulfo-cy5-peg3-biotin>

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.

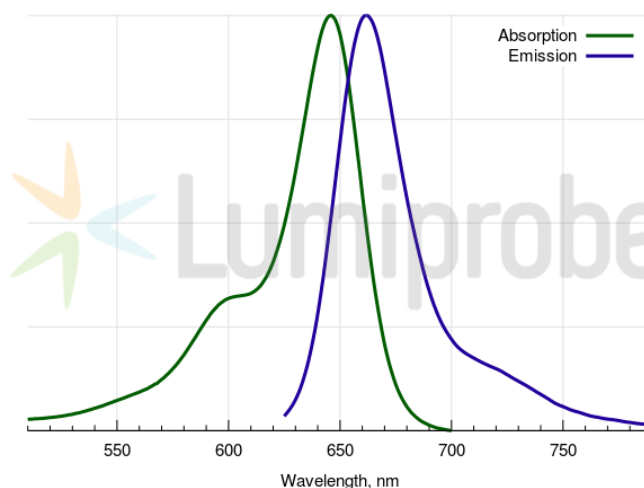
Biotin, or the water-soluble vitamin H, is well known not only for playing essential roles in various crucial metabolic cellular reactions but also for its extremely high affinity for avidin, a glycoprotein of egg white. Avidin, streptavidin (bacterial analogue of avidin), and neutravidin (deglycosylated 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 receipt at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Avoid prolonged exposure to light. Desiccate.

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