

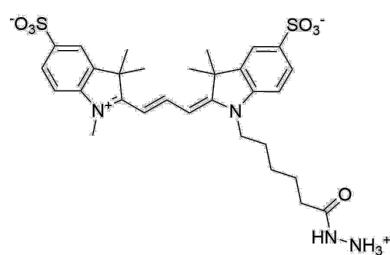
sulfo-Cyanine3 hydrazide

<http://www.lumiprobe.com/p/sulfo-cy3-hydrazide>

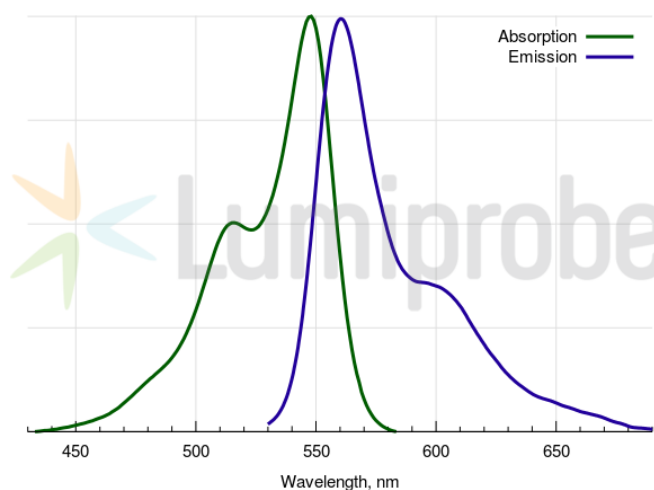
sulfo-Cyanine3 is a sulfated derivative of Cyanine3 dye, well soluble in water because of two negatively charged sulfo groups in its structure. By its spectral characteristics, this yellow-orange fluorescent dye is an analog of Cy™ 3.

Hydrazides efficiently react with aldehydes and ketones resulting in hydrazones, so this compound can be used for conjugation with carbonyl derivatives of biomolecules.

The reaction runs in aqueous conditions, which is important when working with antibodies and proteins. Cys-diol groups in sugars in glycosylated proteins and antibodies can be oxidized into dialdehydes, and cysteine in proteins can be converted with enzymes to formyl glycerol (i. e. reactive groups for conjugation with sulfo-Cyanine3 hydrazide). Carboxyl groups of aspartic and glutamic acids in proteins and peptides can be also conjugated with sulfo-Cyanine3 hydrazide in the presence of activating agents: carbodiimide (EDAC) or methyl morpholine (DMTMM) derivatives.



Structure of sulfo-Cyanine3 hydrazide



Absorption and emission spectra of sulfo-Cyanine3

General properties

Appearance:	dark red solid
Molecular weight:	630.78
CAS number:	2144762-62-7
Molecular formula:	C ₃₀ H ₃₈ N ₄ O ₇ S ₂
IUPAC name:	3H-Indolium, 2-[3-[1-(6-hydrazinyl-6-oxohexyl)-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propen-1-yl]-1,3,3-trimethyl-5-sulfo-, inner salt
Solubility:	soluble in water, DMF, DMSO
Quality control:	NMR ¹ H, HPLC-MS (90%)
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.

Spectral properties

Excitation/absorption maximum, nm:	548
ε, L·mol ⁻¹ ·cm ⁻¹ :	162000
Emission maximum, nm:	563
Fluorescence quantum yield:	0.1
CF ₂₆₀ :	0.03
CF ₂₈₀ :	0.06