

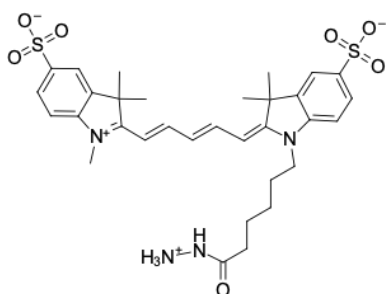
## sulfo-Cyanine5 hydrazide

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

sulfo-Cyanine5 is a sulfated derivative of Cyanine5 dye, well soluble in water because of two negatively charged sulfo groups in its structure. By its spectral characteristics, this far-red fluorescent dye is an analog of Cy<sup>™</sup> 5.

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-Cyanine5 hydrazide). Carboxyl groups of aspartic and glutamic acids in proteins and peptides can be also conjugated with sulfo-Cyanine5 hydrazide in the presence of activating agents: carbodiimide (EDAC) or methyl morpholine (DMTMM) derivatives.



**Structure of sulfo-Cyanine5 hydrazide**

### General properties

Appearance:	dark blue solid
Molecular weight:	656.83
CAS number:	2055138-61-7
Molecular formula:	C <sub>32</sub> H <sub>40</sub> N <sub>4</sub> O <sub>7</sub> S <sub>2</sub>
Solubility:	very good in water, good in DMF and DMSO
Quality control:	NMR <sup>1</sup> H and HPLC-MS (95+%)
Storage conditions:	24 months after receipt at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate. Avoid prolonged exposure to light.

### Spectral properties

Excitation/absorption maximum, nm:	646
ε, L·mol <sup>-1</sup> ·cm <sup>-1</sup> :	271000
Emission maximum, nm:	662
Fluorescence quantum yield:	0.28
CF <sub>260</sub> :	0.04
CF <sub>280</sub> :	0.04

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