

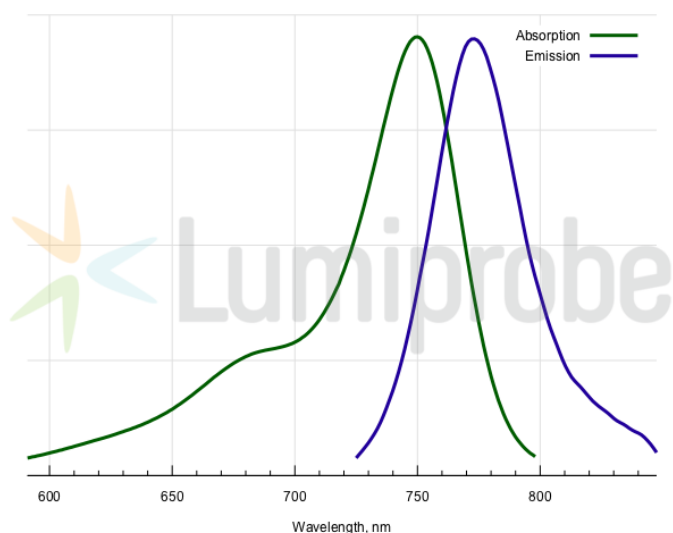
sulfo-Cyanine7 TCO

<http://www.lumiprobe.com/p/sulfo-cy7-tco>

sulfo-Cyanine7 TCO is a near-infrared (NIR) fluorescent dye functionalized with a trans-cyclooctene (TCO) moiety for rapid, catalyst-free bioorthogonal labeling via the inverse-electron-demand Diels-Alder (IEDDA) reaction with tetrazines.

The sulfo-Cyanine7 fluorophore provides strong absorption and emission in the NIR region (excitation at 750 nm, emission at 773 nm), enabling deep-tissue imaging, low cellular autofluorescence, and high signal-to-background ratios. Introduction of sulfonate groups renders the dye highly water-soluble and minimizes nonspecific interactions with cellular components, which is particularly advantageous for live-cell and *in vivo* applications.

The TCO group is a strained alkene that reacts extremely fast and selectively with tetrazine-modified biomolecules, enabling efficient labeling at low probe concentrations and short incubation times. This makes sulfo-Cyanine7 TCO well-suited for pretargeted imaging strategies, pulse-chase experiments, and dynamic studies of biomolecules.



Absorption and emission spectra of sulfo-Cyanine7

General properties

| | |
|---------------------|---|
| Appearance: | deep-blue crystals |
| Molecular weight: | 997.37 |
| CAS number: | 2129525-69-3 |
| Molecular formula: | C ₅₂ H ₆₉ KN ₄ O ₉ S ₂ |
| Solubility: | water, DMSO, DMF |
| Quality control: | NMR ¹ 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. |
| 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, <i>in vitro</i> diagnostic purposes, in the manufacture of food or pharmaceutical products, in medical devices or in cosmetic products. |

Spectral properties

| | |
|--|--------|
| Excitation/absorption maximum, nm: | 750 |
| ε, L·mol ⁻¹ ·cm ⁻¹ : | 240600 |
| Emission maximum, nm: | 773 |
| Fluorescence quantum yield: | 0.24 |

CF₂₆₀:

0.04

CF₂₈₀:

0.04