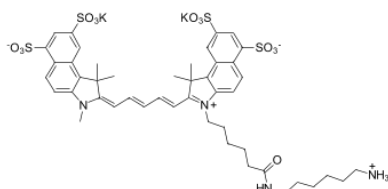


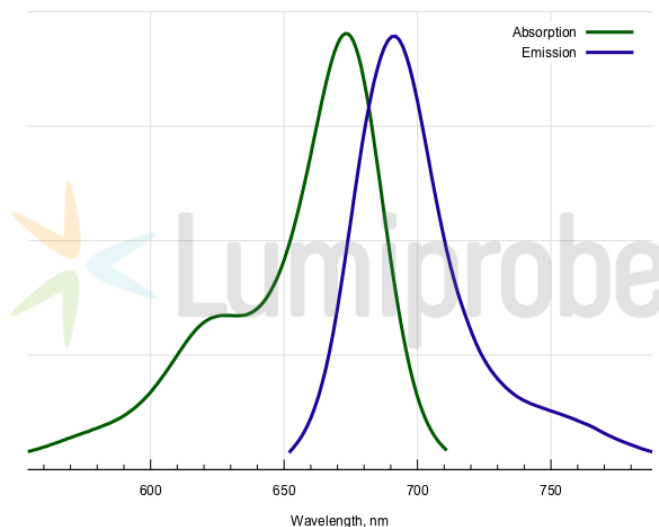
Sulfo-Cyanine5.5 amine

Sulfo-Cyanine5.5 is a water soluble cyanine dye for far red / NIR applications such as in vivo imaging. The dye possesses four sulfonate groups that render it highly hydrophilic and water soluble. As well as other cyanines, sulfo-Cyanine5.5 has an outstanding extinction coefficient that makes it a bright fluorescent label for the far red region.

This is an amine-containing fluorescent dye. The amine group is separated from the fluorophore by a relatively long linker that facilitates conjugation. The aliphatic primary amine group can be coupled with various electrophiles (activated esters, epoxides, etc), and also be used in enzymatic transamination labeling.



Structure of sulfo-Cyanine5.5 amine



Absorption and emission spectra of sulfo-Cyanine5.5 fluorophore

General properties

Appearance: dark blue solid

Molecular weight: 1077.41

CAS number: 2183440-46-0 (potassium salt), 2183440-45-9

Molecular formula: $C_{44}H_{54}K_2N_2O_{12}S_4$

IUPAC name: (E)-4-[(2E,4E)-5-[5-[6-(6-Aminohexylamino)-6-oxohexyl]-3,3-dimethyl-10,12-bis(oxy)sulfonyl]-5-azatricyclo[7.4.0.0.2,6]trideca-1,4,6,8,10,12-hexaen-4-yl]-2,4-pentadienylidene]-3,3-dimethyl-5-methyl-5-azatricyclo[7.4.0.0.2,6]trideca-1,6,8,10,12-pentaene-10,12-disulfonic acid dipotassium salt

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 maximum, nm: 673

ϵ , L·mol⁻¹·cm⁻¹: 235000

Emission maximum, nm: 691

CF₂₆₀²: 0.09

CF₂₈₀²: 0.11