

Cyanine7 NHS ester

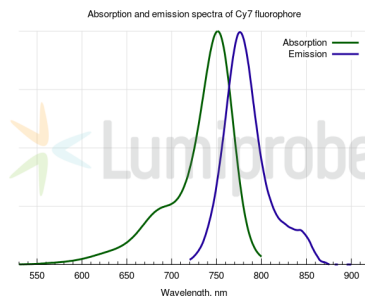
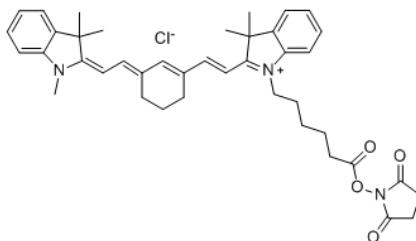
Amine reactive Cyanine7, near infrared fluorescent dye, an improved analog of Cy7®.

NIR fluorophores can be used to take advantage of near infrared window of biological tissues - increased transparency of tissues in this spectral region allows to carry out in vivo imaging.

This reagent can be utilized to produce Cyanine7-labeled biomolecules for subsequent use in various in vivo research, and drug design related experiments.

The structure of Cyanine7 features rigidized design of central polymethyne chain. This molecular reinforcement allows to increase quantum yield by 20% compared with parent structure, increasing fluorescence brightness.

This reagent requires organic co-solvent for the labeling (please see Recommended Protocols section below). Water-soluble Cyanine7 NHS ester is also available, and recommended for protein NIR labeling.



General properties

Appearance:	green powder
Molecular weight:	682.29
Molecular formula:	$C_{47}H_{46}ClN_3O_4$
Solubility:	soluble in organic solvents (DMSO, DMF, dichloromethane), low solubility in water
Quality control:	NMR 1H , HPLC-MS (95%)
Storage conditions:	Storage: 12 months after receipt at $-20^\circ C$ in the dark. Transportation: at room temperature for up to 3 weeks. Avoid prolonged exposure to light. Desiccate.

Spectral properties

Excitation maximum, nm:	750
ϵ , $L \cdot mol^{-1} \cdot cm^{-1}$:	199000
Emission maximum, nm:	773
Fluorescence quantum yield:	0.3