

Cyanine7 NHS ester

<http://www.lumiprobe.com/p/cy7-nhs-ester>

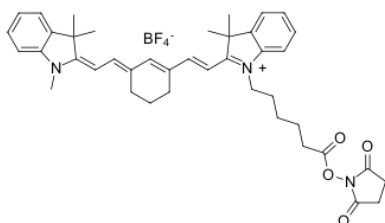
Amine reactive Cyanine7, near infrared fluorescent dye, an improved analog of Cy7®.

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.

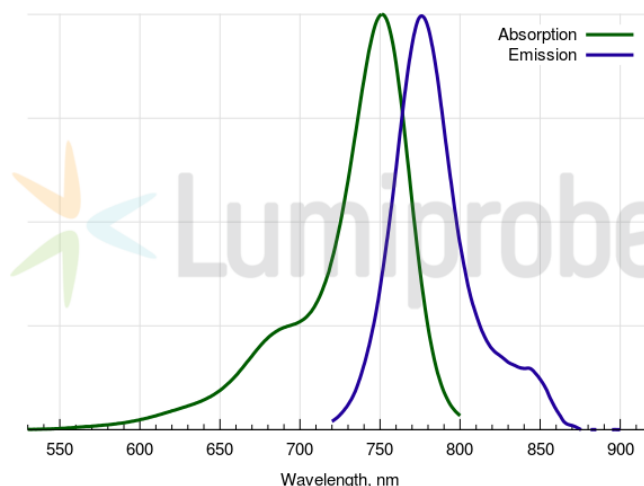
This reagent can be utilized to produce Cyanine7-labeled biomolecules for subsequent use in various in vivo research, and drug design related experiments.

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.



Cy7 NHS ester structure



Cy7 absorbance and emission spectra

General properties

Appearance:	dark green solid
Molecular weight:	733.64
CAS number:	2408482-09-5
Molecular formula:	C ₄₁ H ₄₈ N ₃ BF ₄ O ₄
Solubility:	soluble in organic solvents (DMSO, DMF, dichloromethane), low solubility in water
Quality control:	NMR ¹ H, HPLC-MS (95%)
Storage conditions:	Storage: 12 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/absorption maximum, nm:	750
ε, L·mol ⁻¹ ·cm ⁻¹ :	199000
Emission maximum, nm:	773
Fluorescence quantum yield:	0.3
CF ₂₆₀ :	0.022
CF ₂₈₀ :	0.029