

Cyanine7 hydrazide

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

Hydrazide derivative of Cyanine7, a NIR fluorescent dye, an analog of Cy7®.

This variety of heptamethine fluorophore contains a six-membered ring rigidizing the polymethine chain which allows to increase quantum yield by 20% compared to parent structure.

Hydrazide reacts quickly and smoothly with aldehydes and ketones yielding stable hydrazone products. This reaction is also good for the labeling of glycoproteins after periodate oxidation.



Structure of Cyanine7 hydrazide



Cyanine7 absorbance and emission spectra

General properties

Appearance:	green powder
Mass spec M+ increment:	544.8
Molecular weight:	635.70
CAS number:	2183440-61-9 (without anion)
Molecular formula:	C ₃₇ H ₄₈ Cl ₂ N ₄ O
Solubility:	moderate solubility in water, good in polar organic solvents (DMF, DMSO, alcohols)
Quality control:	NMR ¹ H, 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/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

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