

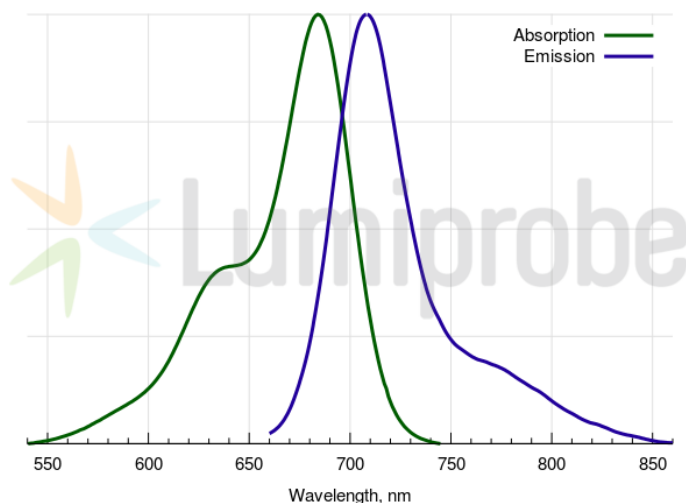
Cyanine5.5 hydrazide

<http://www.lumiprobe.com/p/cy55-hydrazide>

Cyanine5.5 hydrazide is a carbonyl-reactive near infrared dye. Hydrazides quickly react with carbonyl compounds, such as aldehydes and ketones, and form stable hydrazones. This reaction is useful for the preparation of labeled conjugates.

Carbonyl groups in biomolecules can form spontaneously after oxidative stress or deamination of proteins. Alternatively, aldehyde groups can be specifically generated by periodate oxidation of sugar residues of glycoproteins, for example antibodies. Antibodies can be oxidized by sodium periodate and labeled with Cyanine5.5 hydrazide to form Cyanine5.5 labeled antibodies. Since sugar residues in antibodies are located far from variable, epitope-binding site, this method is particularly good for the labeling of antibodies.

Cyanine5.5 is a near infrared fluorophore, an analog of Cy5.5®. It is particularly suitable for the applications which require low fluorescence background. The absorption and emission wavelength of the dye exhibit significant tissue penetration, so Cyanine5.5 is suitable for in vivo NIR imaging applications.



Cyanine5.5 absorbance and emission spectra

General properties

Appearance:	dark blue powder
Molecular weight:	779.24
Molecular formula:	C ₄₀ H ₄₆ N ₄ CIPF ₆ O
Solubility:	practically insoluble in water (< 2 µM), 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:	684
ε, L·mol ⁻¹ ·cm ⁻¹ :	198000
Emission maximum, nm:	710
Fluorescence quantum yield:	0.2
CF ₂₆₀ :	0.07
CF ₂₈₀ :	0.03