

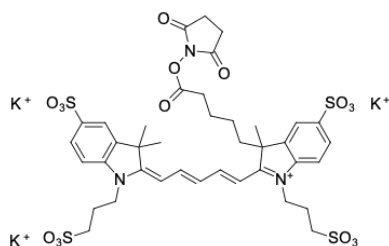
## AF 647 NHS ester

<http://www.lumiprobe.com/p/af647-nhs-ester>

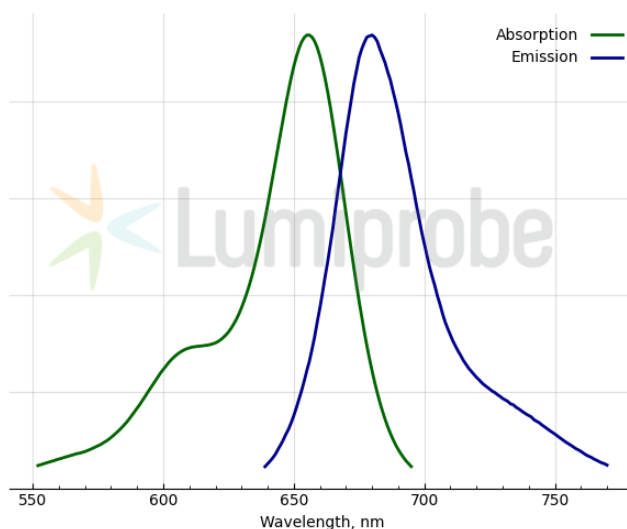
AF 647 NHS ester is a bright, far-red fluorescent dye, used for cellular visualization and labeling of antibodies, peptides, proteins, modified oligonucleotides, and other amine-containing molecules.

Due to the lack of significant self-quenching AF 647 dye molecules can be conjugated to proteins at high molar ratios, resulting in the sensitive detection of low-abundance biomolecules potential.

AF 647 NHS ester dye possesses high water-solubility and high fluorescence quantum yield; it is pH-insensitive over a wide molar range. Widely applied for imaging and flow cytometry.



**Structure of AF 647 NHS ester**



**Absorption and emission spectra of AF 647**

### General properties

Appearance:	dark violet solid
Molecular weight:	1056.33
Molecular formula:	$C_{39}H_{44}N_4K_5O_{10}S_4$
IUPAC name:	2-((1E,3E)-5-((E)-3,3-dimethyl-5-sulfonato-1-(3-sulfonatopropyl)indolin-2-ylidene)penta-1,3-dien-1-yl)-3-(5-((2,5-dioxopyrrolidin-1-yl)oxy)-5-oxopentyl)-3-methyl-1-(3-sulfonatopropyl)-3H-indol-1-ium-5-sulfonate
Solubility:	good in water, DMSO
Quality control:	NMR $^1H$ , HPLC-MS (90%)
Storage conditions:	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.
Legal statement:	This Product is offered and sold for research purposes only. It has not been tested for safety and efficacy in food, drug, medical device, cosmetic, commercial or any other use. Supply does not express or imply authorization to use for any other purpose, including, without limitation, in vitro diagnostic purposes, in the manufacture of food or pharmaceutical products, in medical devices or in cosmetic products.

### Spectral properties

Excitation/absorption maximum, nm:	655
$\epsilon$ , L·mol $^{-1}$ ·cm $^{-1}$ :	191800
Emission maximum, nm:	680
Fluorescence quantum yield:	0.15
CF $_{260}$ :	0.09
CF $_{280}$ :	0.08