

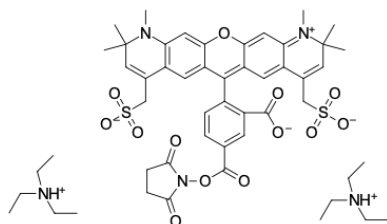
## AF 594 NHS ester

<http://www.lumiprobe.com/p/af594-nhs-ester>

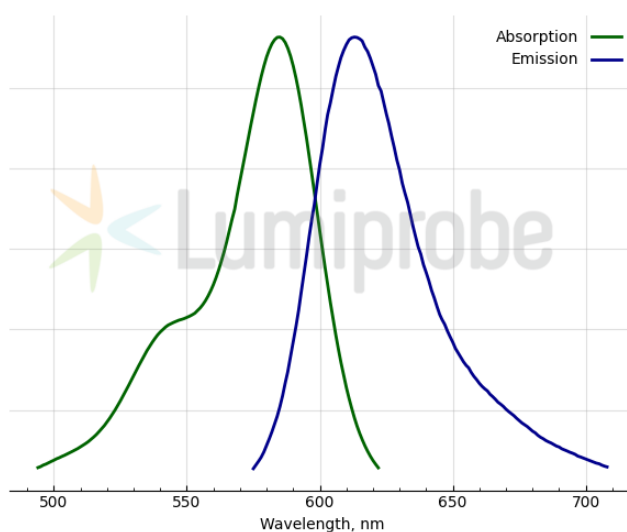
AF 594 is a bright water-soluble dye that is not sensitive to pH changes within the range from 4 to 10. This red-fluorescent dye is commonly used for flow cytometry and fluorescent microscopy.

AF 594 NHS ester is used for labeling proteins, peptides, antibodies, and any molecules containing an -NH<sub>2</sub> group (such as amino-modified oligonucleotides); it results in the formation of stable amide bonds between the dye and the target molecule. The best result in conjugation reaction achieved at pH from 7 to 9.

AF 594 can be used for protein labeling with a high molar dye-to-protein ratio. The resulting conjugates with a high degree of labeling (DOL) do not exhibit significant fluorescence quenching. In contrast, the conjugates have brighter fluorescence, which allows increasing the lowest limit of detection of the labeled product.



**Structure of AF 594 activated ester, 5-isomer**



**AF 594 absorbance and emission spectra**

### General properties

Appearance:	dark-blue crystals
Molecular weight:	1022.23
CAS number:	1638544-48-5
Molecular formula:	C <sub>51</sub> H <sub>67</sub> N <sub>5</sub> O <sub>13</sub> S <sub>2</sub>
IUPAC name:	5-(((2,5-dioxopyrrolidin-1-yl)oxy)carbonyl)-2-(1,2,2,10,10,11-hexamethyl-4,8-bis(sulfonatomethyl)-10,11-dihydro-2H-pyrano[3,2-g:5,6-g']diquinolin-1-ium-6-yl)benzoate
Solubility:	soluble in water, DMSO, DMF
Quality control:	NMR <sup>1</sup> 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:	586
ε, L·mol <sup>-1</sup> ·cm <sup>-1</sup> :	105000
Emission maximum, nm:	613
Fluorescence quantum yield:	0.77
CF <sub>280</sub> :	0.28
CF <sub>280</sub> :	0.51