

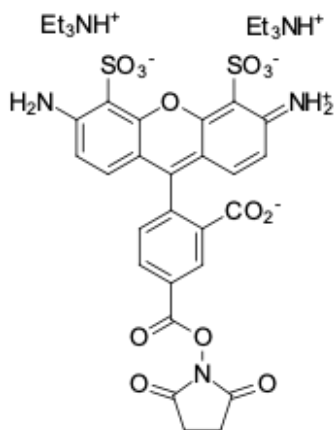
AF488 NHS ester

<http://www.lumiprobe.com/p/alexa-fluor-488-nhs-ester>

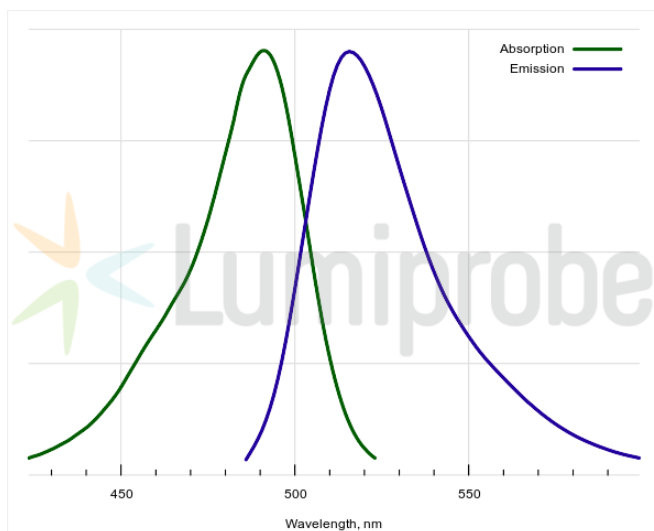
AF488 is a bright and photostable dye, equivalent of Alexa Fluor® 488. Due to its high hydrophilicity, this is a dye of choice for the labeling of sensitive proteins and antibodies. The dye is useful for many demanding applications, including microscopy.

From the chemical standpoint, AF488 is a sulfonated rhodamine dye Rhodamine 110 (R110). Like other rhodamines, it is available as 5- and 6-isomers, which have almost identical photophysical properties. The isomers need to be separated though - otherwise, use of mixed isomer dye can lead to doubled peaks during HPLC or electrophoresis separations of the labeled products. This product is an isomerically pure 5-AF488.

This NHS ester is an amine reactive dye, it can label amine groups in proteins, peptides, amino-modified oligos, and other target molecules.



Structure of AF488 NHS ester



Absorption and emission spectra of AF488

General properties

Appearance:	dark orange solid
Molecular weight:	732.74
Molecular formula:	$C_{31}H_{32}N_4O_{13}S_2$
Solubility:	good in water, DMF, DMSO
Quality control:	NMR 1H , HPLC-MS (80+%, balance mostly carboxylic acid)
Storage conditions:	Storage: 12 months after receipt at $-20^\circ C$ in the dark. Transportation: at room temperature for up to 3 weeks. Avoid prolonged exposure to light. Desiccate.

Spectral properties

Excitation maximum, nm:	495
ϵ , $L \cdot mol^{-1} \cdot cm^{-1}$:	71800
Emission maximum, nm:	519
Fluorescence quantum yield:	0.91