

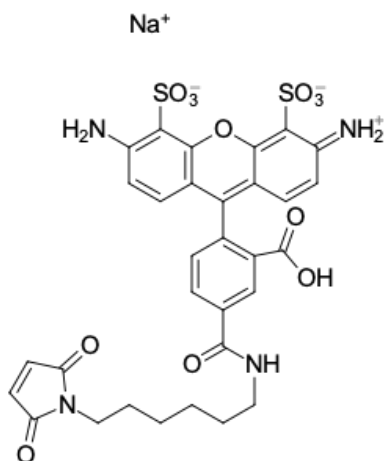
## AF 488 maleimide

<http://www.lumiprobe.com/p/af-488-maleimide-5>

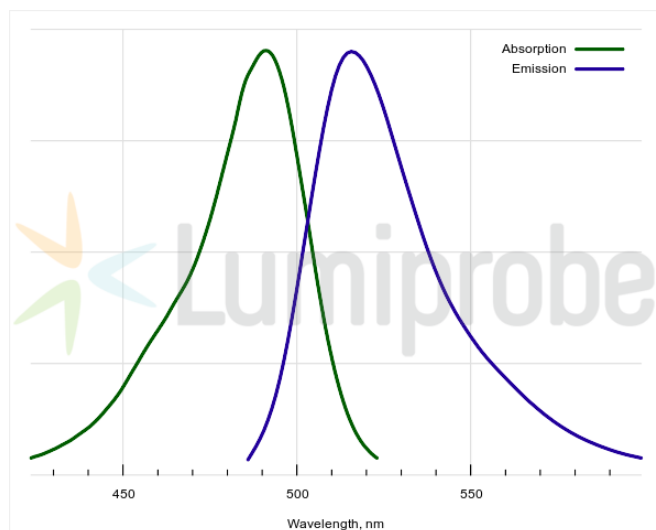
AF 488 C6 maleimide is a thiol-reactive dye for labeling of protein SH groups, and it can be used to attach AF 488 fluorophore to proteins and peptides containing cysteine residues, as well as to other thiolated molecules (such as thiol-containing oligonucleotides). Cystines should be reduced with TCEP (tris-carboxyethylphosphine) or with another appropriate reductant prior to the labeling.

AF 488 is a bright and photostable dye. Due to its high hydrophilicity, this is a dye of choice for sensitive proteins and antibodies labeling. The dye is useful for numerous demanding applications, including microscopy.

AF 488 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, the use of mixed isomer dye can lead to doubled peaks during HPLC or electrophoresis separations of the labeled products otherwise. We offer an isomerically pure 5-AF 488.



**Structure of AF 488 maleimide, 5-isomer**



**Absorption and emission spectra of AF 488**

### General properties

Appearance:	red-orange powder
Molecular weight:	734.69
Molecular formula:	$C_{31}H_{31}N_4NaO_{12}S_2$
Solubility:	good in DMSO, DMF
Quality control:	NMR $^1H$ and HPLC-MS (95+%)
Storage conditions:	12 months after receipt at $-20^\circ C$ in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate. Avoid prolonged exposure to light.
Legal statement:	Product is offered and sold for research purposes only. Product is not tested for safety and efficacy in food, drug, medical device, cosmetic, no express or implied authorization to use for any other purpose, including, without limitation, in vitro diagnostic purposes, for humans or animals or for commercial purposes.

### Spectral properties

Excitation/absorption maximum, nm:	495
$\epsilon$ , $L \cdot mol^{-1} \cdot cm^{-1}$ :	71800
Emission maximum, nm:	519
Fluorescence quantum yield:	0.91
$CF_{260}$ :	0.16

