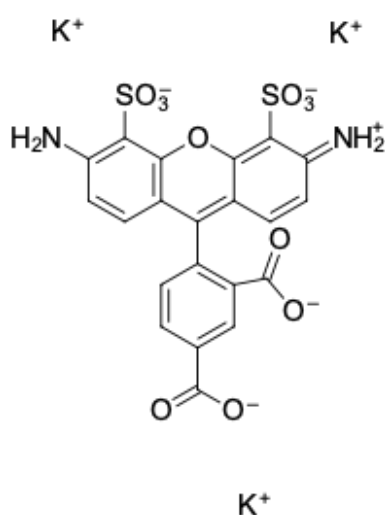


AF 488 carboxylic acid

<http://www.lumiprobe.com/p/af-488-carboxylic-acid>

AF 488 is a bright green-fluorescent dye that is commonly used in microscopy and cell assays because of its photostability. AF 488 can be used with [DAPI](#) and is well suited to multiplex assay. AF 488 has high quantum yield and stable fluorescence within the pH range from 4 to 10.

AF 488 carboxylic acid is a non-reactive AF 488 form that can be used as a reference standard in experiments where AF 488 conjugates are used. The carboxylic acid can be also used for the synthesis of activated esters [such as sulfo-NHS, TFP (2,3,5,6-tetrafluorophenol) and STP (4-sulfo-2,3,5,6-tetrafluorophenol)] or modified with hydrazines, hydroxylamines, or amines in aqueous solutions using water-soluble carbodiimides. Thus, this derivative can be conjugated to molecules that contain amino groups, such as proteins, antibodies, and peptides. Therefore, AF 488 carboxylic acid is used during solid-phase peptide synthesis for peptide modification *in situ* in the presence of activating agents such as HATU.



Structure of AF 488 carboxylic acid

General properties

Appearance:	orange crystals
Molecular weight:	648.75
Molecular formula:	$C_{21}H_{11}K_3N_2O_{11}S_2$
IUPAC name:	4-(6-amino-3-iminio-4,5-disulfonato-3H-xanthen-9-yl)isophthalate
Solubility:	good in DMSO, DMF
Quality control:	NMR 1H , HPLC-MS (95%)
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.

Spectral properties

Excitation/absorption maximum, nm:	495
ϵ , $L \cdot mol^{-1} \cdot cm^{-1}$:	71800
Emission maximum, nm:	519
Fluorescence quantum yield:	0.91
CF_{260} :	0.16
CF_{280} :	0.10