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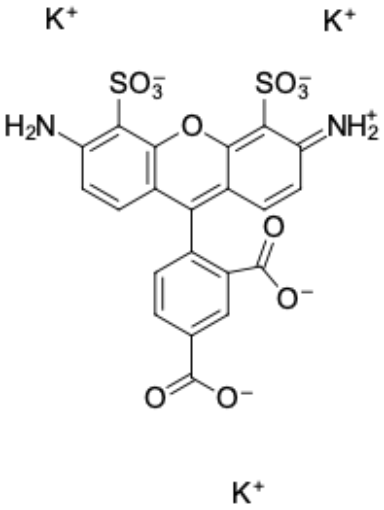
AF 488 carboxylic acid

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 ^{1}H, HPLC-MS (95%)
Storage conditions:	Storage: 12 months after receival at -20°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