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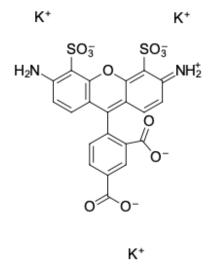
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AF 488 carboxylic acid

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 <u>DAPI</u> 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)] 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 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, 495

nm:

 ϵ , L·mol⁻¹·cm⁻¹: 71800 Emission maximum, nm: 519 Fluorescence quantum yield: 0.91 CF₂₆₀: 0.16 CF₂₈₀: 0.10