

## 5(6)-Carboxyfluorescein

## Chemical Properties

CAS No. : 72088-94-9

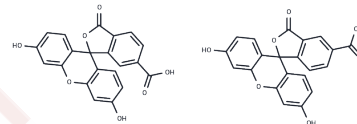
Formula: C<sub>21</sub>H<sub>12</sub>O<sub>7</sub>

Molecular Weight: 376.32

Keep away from direct sunlight

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



## Biological Description

Description	5(6)-Carboxyfluorescein (5-(and-6)-Carboxyfluorescein mixed isomers) contains a carboxylic acid that can be used to react with primary amines via carbodiimide activation of the carboxylic acid.
Targets(IC50)	Others
Cell Research	<p>Instructions</p> <ol style="list-style-type: none"> <li>Labeling process:             <ol style="list-style-type: none"> <li>5(6)-Carboxyfluorescein reacts with amino-containing biomolecules (such as proteins or peptides) to form a stable covalent bond. The commonly used reaction conditions are neutral or slightly alkaline pH environment.</li> <li>The reaction needs to be carried out in an appropriate buffer, usually phosphate buffered saline (PBS) or other biocompatible buffers. The reaction time is adjusted according to the concentration of the target molecule and the labeling requirements.</li> </ol> </li> <li>Post-labeling treatment:             <ol style="list-style-type: none"> <li>After the reaction is completed, dialysis or centrifugation is used to remove unreacted dye to ensure the purity of the labeled molecule.</li> <li>The labeled protein or peptide can be used in a variety of downstream applications, such as fluorescence microscopy, flow cytometry analysis, fluorescence quantitative PCR, etc.</li> </ol> </li> <li>pH-sensitive properties:             <p>5(6)-Carboxyfluorescein is pH-dependent, and its fluorescence intensity changes under different pH conditions. This makes it an ideal choice for studying intracellular pH changes (such as acidic areas in tumor microenvironments).</p> </li> </ol> <p>The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.</p>

## Solubility Information

Solubility	DMSO: 247.5 mg/mL (657.68 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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In vivo Formulation	10% DMSO+90% Saline: < 10 mg/mL (26.57 mM), Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 10 mg/mL (26.57 mM), Solution. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>
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## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6573 mL	13.2866 mL	26.5731 mL
5 mM	0.5315 mL	2.6573 mL	5.3146 mL
10 mM	0.2657 mL	1.3287 mL	2.6573 mL
50 mM	0.0531 mL	0.2657 mL	0.5315 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

## Reference

Yang C, et al. A renal YY1-KIM1-DR5 axis regulates the progression of acute kidney injury. Nat Commun. 2023 Jul 17;14(1):4261.

Kvach MV, et al. 5(6)-carboxyfluorescein revisited: new protecting group, separation of isomers, and their spectral properties on oligonucleotides. Bioconjug Chem. 2007 Sep-Oct;18(5):1691-6.

Mordon S, Devoisselle JM, Maunoury V. In vivo pH measurement and imaging of tumor tissue using a pH-sensitive fluorescent probe (5,6-carboxyfluorescein): instrumental and experimental studies. Photochem Photobiol. 1994 Sep;60(3):274-9.

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