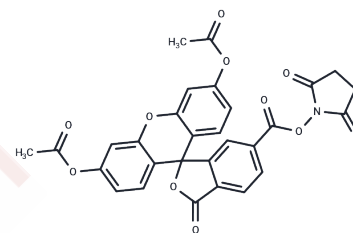


6-CFDA N-succinimidyl ester

Chemical Properties

CAS No. :	150206-15-8
Formula:	C ₂₉ H ₁₉ N ₁ O ₁₁
Molecular Weight:	557.46
Storage:	Keep away from direct sunlight Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



Biological Description

Description	6-CFDA N-succinimidyl ester (Carboxyfluorescein diacetate succinimidyl) is capable of spontaneously and irreversibly binding to free amines. Utilized in flow cytometry experiments for tracking cell division in both mammalian cells and bacteria. Used in combination with several cell permeabilizers as an effective, nondestructive fluorescent stain to quickly detect bacterial cells.
Targets(IC50)	Others
Cell Research	<p>Instructions</p> <p>I. Solution preparation</p> <ol style="list-style-type: none"> 1. Stock solution preparation: 6-CFDA N-succinimidyl ester is dissolved in anhydrous dimethyl sulfoxide (DMSO), usually prepared at a concentration of 1-10 mM. 2. Working solution preparation: Dilute the 6-CFDA solution to a concentration of 1-10 μM for use. <p>II. Operation steps</p> <p>Cell labeling reaction</p> <ol style="list-style-type: none"> 1. Cell treatment: Culture the cells to be labeled in a suitable growth environment. To increase the cell uptake of the dye, a cell permeabilizing agent (such as Triton X-100 or a surfactant) can be used. 2. Dye addition: Add the working solution to the culture medium and culture it with the cells. The cells are incubated in the labeling solution for 30 minutes to 1 hour at room temperature or 37°C. 3. Reaction termination: Wash the cells with a buffer containing the culture medium or PBS (phosphate-buffered saline) to remove unbound dye. 4. Detection and analysis: <ol style="list-style-type: none"> a. Fluorescence microscopy: The labeled cells were observed using a fluorescence microscope with an excitation wavelength of 492 nm and an emission wavelength of 517 nm. b. Flow cytometry: The fluorescence intensity of the cells was analyzed by flow cytometry to detect the labeling and division of the cells. <p>Cell division tracking:</p> <ol style="list-style-type: none"> 1. In flow cytometry, 6-CFDA is often used in cell division experiments. After the labeled cells divide, the fluorescent signal is evenly distributed to the daughter cells, thereby tracking the cell division process. <p>Bacterial labeling: 6-CFDA can also be used for bacterial cell labeling. After the bacterial</p>

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Cell Research	cells are permeabilized, the dye is able to enter the bacterial cells and label their internal molecules. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.
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Solubility Information

Solubility	DMSO: 10 mg/mL (17.94 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.7939 mL	8.9693 mL	17.9385 mL
5 mM	0.3588 mL	1.7939 mL	3.5877 mL
10 mM	0.1794 mL	0.8969 mL	1.7939 mL
50 mM	0.0359 mL	0.1794 mL	0.3588 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

Chai LN, et al. The Mechanism of Antimicrobial Activity of Conjugated Bile Acids against Lactic Acid Bacilli. *Microorganisms*. 2023 Jul 17;11(7):1823.

Zhang Y, et al. Granulocytic myeloid-derived suppressor cells inhibit T follicular helper cells during experimental *Schistosoma japonicum* infection. *Parasit Vectors*. 2021 Sep 26;14(1):497.

Zhu HJ, et al. [Effects of skin $\gamma\delta$ T lymphocytes on wound healing of mice through regulating proliferation and differentiation of mice epidermal cells]. *Zhonghua Shao Shang Za Zhi*. 2019 Apr 20;35(4):298-307. Chinese.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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