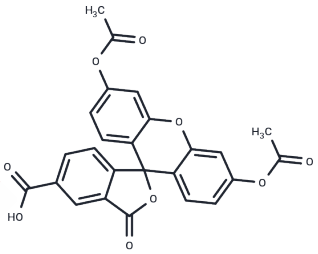
Data Sheet (Cat.No.T14048)

TargetMol

5-CFDA

Chemical Properties



CAS No. : 79955-27-4

Formula: C25H16O9

Molecular Weight: 460.39

Storage: Keep away from direct sunlight
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-CFDA (5-Carboxyfluorescein diacetate)(5-Carboxyfluorescein diacetate) is membrane-permeant. It can be loaded into cells via incubation and hydrolyzed by intracellular esterases to 5-carboxyfluorescein that is used for labeling human intervertebral disk cells in vitro for fluorescence microscopy.
Targets(IC50)	Others
Cell Research	Instructions I. Solution preparation 1. Stock solution: Dissolve 5-CFDA in anhydrous DMSO to prepare a stock solution with a concentration of 1-10 mM. Note: Keep away from light during operation. Store the stock solution at -20°C after aliquoting. Avoid repeated freezing and thawing to ensure stability. 2. Working solution: Dilute the stock solution to the final use concentration (1-10 μM). Phenol red-free cell culture medium or PBS buffer can be used for dilution. II. Operation steps 1. Cell preparation: Collect the adherent or suspension cells to be treated according to the experimental requirements and adjust to the appropriate cell density; rinse the cells 1-2 times with PBS or phenol red-free culture medium to remove substances that may interfere with the experiment. 2. Staining reaction: Add the prepared 5-CFDA working solution to the cell suspension or culture medium to ensure that the dye is in full contact with the cells: usually at a concentration of 1-10 μM, incubate at 37°C in the dark for 15-30 minutes. 3. Washing steps: Wash the cells 2-3 times with PBS or fresh culture medium to remove excess dye that is not absorbed by the cells. 4. Detection and result analysis 1) Fluorescence signal detection: Detection is performed using a fluorescence microscope, flow cytometer, or fluorescence plate reader. Recommended parameters are: Excitation wavelength: 490-495 nm Emission wavelength: 515-525 nm 2) Data processing: Compare the fluorescence intensity of the experimental group and the control group to

Cell Research	evaluate cell activity, track cells, or analyze other biological dynamic changes. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	DMSO: 100 mg/mL (217.21 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 3.3 mg/mL (7.17 mM),Sonication is recommended. *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.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1721 mL	10.8604 mL	21.7207 mL
5 mM	0.4344 mL	2.1721 mL	4.3441 mL
10 mM	0.2172 mL	1.086 mL	2.1721 mL
50 mM	0.0434 mL	0.2172 mL	0.4344 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

Wu Y, et al. 20(S)-Ginsenoside Rh2 overcomes gemcitabine resistance in pancreatic cancer by inhibiting LAMC2-Modulated ABC transporters. J Adv Res. 2024 Sep 11:S2090-1232(24)00390-4.

Deng Z, et al. AI-2/LuxS Quorum Sensing System Promotes Biofilm Formation of Lactobacillus rhamnosus GG and Enhances the Resistance to Enterotoxigenic Escherichia coli in Germ-Free Zebrafish. Microbiol Spectr. 2022 Aug 31; 10(4):e0061022.

Gao M, et al. Correction to: YAN, a novel microtubule inhibitor, inhibits P-gp and MRP1 function and induces mitotic slippage followed by apoptosis in multidrug-resistant A549/Taxol cells. Toxicol In Vitro. 2021 Apr;72: 105033. doi: 10.1016/j.tiv.2020.105033. Epub 2020 Oct 29. Erratum for: Toxicol In Vitro. 2020 Dec;69:104971.