6-CFDA

Cat. No.: HY-D0721

CAS No.: 3348-03-6

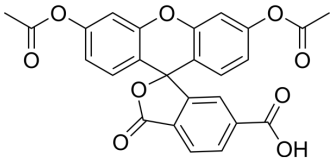
Molecular Formula: $C_{25}H_{16}O_9$

Molecular Weight: 460.39

Target: Fluorescent Dye

Pathway: Others

Storage: -20°C, protect from light
* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (217.21 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	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	1.0860 mL	2.1721 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (5.43 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.43 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.43 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

6-CFDA is a common aliphatic luciferin-line organism. CFDA conducts free diffusion into cells, and then it is hydrolyzed into carboxyl fluorescein (CF) by intracellular non-specific lipase. CF containing portion contains an additional negative charge so that it is better retained in cells, compared to fluorescein dyes[1][2][3][4].

In Vitro

Preparation of 6-CFDA working solution
1.Preparation of the stock solution
Dissolve 1mg 6-CFDA in 0.2172 mL DMSO to obtain 10 mM of 6-CFDA.
Note: It is recommended to store the stock solution at -20 °C -80 °C away from light and avoid repetitive freeze-thaw cycles.
2.Preparation of 6-CFDA working solution

Dilute the stock solution in serum-free cell culture medium or PBS to obtain 1-10 μM of 6-CFDA working solution.
Note: Please adjust the concentration of 6-CFDA working solution according to the actual situation.

Cell staining
1.Cell preparation:
For suspension cells: Centrifuge at 1000 g at 4°C for 3-5 minutes and then discard the supernatant. Wash twice with PBS, 5 minutes each time.
For adherent cells: Discard the cell culture medium, and add trypsin to dissociate cells to make a single-cell suspension. Centrifuge at 1000 g at 4°C for 3-5 minutes and then discard the supernatant. Wash twice with PBS, 5 minutes each time.
2.Add 1 mL of 6-CFDA working solution, and then incubate at room temperature for 30 minutes.
3.Centrifuge at 400 g at 4°C for 3-4 minutes and then discard the supernatant.
4.Wash twice with PBS, 5 minutes each time.
5.Resuspend cells with serum-free cell culture medium or PBS, and then detect by fluorescence microscope or flow cytometer.

Precautions
1. It is recommended to store the stock solution at -20℃ or -80℃ away from light and avoid repetitive freeze-thaw cycles.
2. Please adjust the concentration of 6-CFDA working solution according to the actual situation.
3. This product is for R&D use only, not for drug, household, or other uses.
4. For your safety and health, please wear a lab coat and disposable gloves to operate.
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Yang T, et al. A novel nonradioactive CFDA assay to monitor the cellular immune response in myeloid leukemia. Immunobiology. 2013 Apr;218(4):548-53.

[2]. Card SD, et al. Assessment of fluorescein-based fluorescent dyes for tracing Neotyphodium endophytes in planta. Mycologia. 2013 Jan-Feb;105(1):221-9.

[3]. Fang X, et al. Bone marrow-derived endothelial progenitor cells are involved in aneurysm repair in rabbits. J Clin Neurosci. 2012 Sep;19(9):1283-6.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA