C12FDG

Cat. No.: HY-126839

CAS No.: 138777-25-0

Molecular Formula: $C_{44}H_{55}NO_{16}$

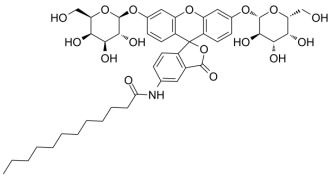
Molecular Weight: 853.9

Target: Fluorescent Dye

Pathway: Others

Storage: 4°C, protect from light

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



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (58.55 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.1711 mL	5.8555 mL	11.7110 mL
	5 mM	0.2342 mL	1.1711 mL	2.3422 mL
	10 mM	0.1171 mL	0.5855 mL	1.1711 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: ≥ 1.25 mg/mL (1.46 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 1.25 mg/mL (1.46 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1.25 mg/mL (1.46 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

C12FDG (5-Dodecanoylaminofluorescein di-β-D-Galactopyranoside) is a lipophilic green fluorescent substrate for β-galactosidase detection. C12-FDG is more sensitive than FDG (HY-101895) for beta-galactosidase activity determinations in animal cells[1].

In Vitro

Guidelines (Following is our recommended protocol. This protocol only provides a guideline, and should be modified according to your specific needs).

Fluorescent senescence-associated β-galactosidase (SA-β-Gal) assay[2]:
1. Culture cells in 6-, 12- , 24-, or 96-well plates at a density of 5× 10^5 cells/mL overnight. Incubate the cells according to your

normal protocol.
2. Wash cells by 200 μL of PBS once and fix with 100 μL of fixation solution (2% formaldehyde/0.2% glutaraldehyde in distilled water) at room temperature for 5 min.
3. Wash cells by 200 μL of PBS two times, and stain with 100 μL of 33 μM C12FDG (in PBS, pH=6.0) for 10 min, and with 200 μL of Hoechst solution (1 μg/mL Hoechst 33342 (HY-15559) in PBS, pH 6.0) for 10 min.
4. Image these cells by a 20× objective and 360-nm (Hoechst 33342) and 480-nm (C12FDG) excitation filters, and monitor through 460-nm and 535-nm emission filters, respectively.
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Plovins A, et al. Use of fluorescein-di-beta-D-galactopyranoside (FDG) and C12-FDG as substrates for beta-galactosidase detection by flow cytometry in animal, bacterial, and yeast cells. Appl Environ Microbiol. 1994 Dec;60(12):4638-41.

[2]. Udono M, et al. Quantitative analysis of cellular senescence phenotypes using an imaging cytometer. Methods. 2012 Mar;56(3):383-8.

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