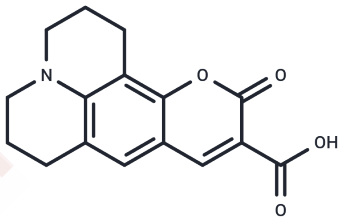
Data Sheet (Cat.No.T77557)

TargetMol

Coumarin343

Chemical Properties



CAS No. : 55804-65-4

Formula: C16H15NO4

Molecular Weight: 285.29

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	Coumarin343 inhibits monocarboxylic acid transporter protein 4 with IC50 values in the range of 0.01-100 μM.Coumarin343 exhibits anticancer and antibacterial activity. Coumarin343 is a coumarin dye.
Targets(IC50)	Others,Antibacterial,Monocarboxylate transporter
Cell Research	As an MCT4 inhibitor 1. Dissolution: Coumarin 343 can be dissolved in organic solvents such as DMSO or ethanol with good solubility. The specific solubility and solvent selection depend on the experimental conditions. 2. IC50 concentration: In the experiment of inhibiting MCT4, the concentration range of Coumarin 343 is usually 0.01-100 μM, and the specific concentration is optimized according to the experimental design. 3. Cell treatment: In the cell model, different concentrations of Coumarin 343 are added to the culture medium to observe its inhibitory effect on MCT4 function. Changes in MCT4 protein or RNA can be detected by Western blot, RT-PCR and other techniques. II. Application of anticancer and antibacterial activity: Coumarin 343 has certain anticancer activity in cancer cells, which can act by affecting the metabolic pathways of cancer cells or by direct cytotoxic effects. Its antibacterial activity also makes it useful in the study of infectious diseases, especially in the potential to inhibit the growth of certain bacteria. 3. Fluorescence labeling and imaging: When used, Coumarin 343 can be dissolved in DMSO or PBS and added to the cell culture medium for staining, usually for 15-30 minutes. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	DMSO: 4.23 mg/mL (14.83 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.5052 mL	17.526 mL	35.0521 mL
5 mM	0.701 mL	3.5052 mL	7.0104 mL
10 mM	0.3505 mL	1.7526 mL	3.5052 mL
50 mM	0.0701 mL	0.3505 mL	0.701 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

Chowdhury S,et al. Identical Diffusion Distributions and Co-Cluster Formation Dictate Azeotrope Formation: Microscopic Evidences and Experimental Signatures. J Phys Chem B. 2023 Oct 5;127(39):8417-8431.
Ugalde-Arbizu M, et al. Dual Anticancer and Antibacterial Properties of Silica-Based Theranostic Nanomaterials Functionalized with Coumarin343, Folic Acid and a Cytotoxic Organotin(IV) Metallodrug. Pharmaceutics. 2023 Feb 7;15(2):560.