

Coumarin343

Chemical Properties

CAS No. :	55804-65-4
Formula:	C ₁₆ H ₁₅ NO ₄
Molecular Weight:	285.295
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	Coumarin343 inhibits monocarboxylic acid transporter protein 4 with IC ₅₀ 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	<p>As an MCT4 inhibitor</p> <ol style="list-style-type: none">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. <p>II. Application of anticancer and antibacterial activity:</p> <p>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.</p> <ol style="list-style-type: none">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. <p>The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.</p>

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	3.5051 mL	17.5254 mL	35.0508 mL
5 mM	0.701 mL	3.5051 mL	7.0102 mL
10 mM	0.3505 mL	1.7525 mL	3.5051 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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481