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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Coumarin 6

Cat. No.: HY-N7131

CAS No.: 38215-36-0

Molecular Formula: $C_{20}H_{18}N_2O_2S$

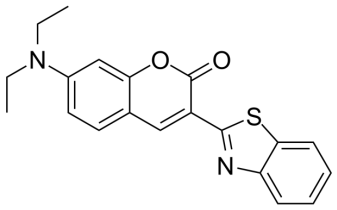
Molecular Weight: 350.43

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

THF : 12.5 mg/mL (35.67 mM; Need ultrasonic)

DMSO : 5 mg/mL (14.27 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.8536 mL	14.2682 mL	28.5364 mL
5 mM	0.5707 mL	2.8536 mL	5.7073 mL
10 mM	0.2854 mL	1.4268 mL	2.8536 mL

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

BIOLOGICAL ACTIVITY

Description

Coumarin 6, a fluorescent dye, is used as a fluorescent probe in a microparticle drug delivery system to conduct in vivo tracking, cell uptake, and transport mechanism studies of drug delivery systems (λ_{exc}=450 nm, λ_{em}=505 nm)[1][2][3].

In Vitro

Coumarin 6 labeled HPMC nanoparticles[3]

(1) Dissolve Coumarin 6 in DMF to prepare a 5 mg/mL organic phase solution.

(2) Dissolve hydroxypropyl methyl cellulose (HPMC) in HBSS to prepare a 50 μg/mL aqueous solution.

(3) Add the organic solution to the aqueous solution using a MasterFlex L/S pump (volume ratio of organic solution to aqueous solution is 1:100) with an injection rate of 36 mL/min.

(4) Prepare 70 nm nanoparticles by stirring at room temperature for 5 min at a stirring speed of 9 mL/min.

(5) Add 2 μg/mL nanoparticles to the MDCKII cell culture dish and incubate in the dark for 5 min, 15 min, 30 min and 60 min.

(6) Add cold PBS buffer to stop the uptake of nanoparticles by MDCKII cells and clean with HBSS.

(7) Use a fluorescence microscope to observe the uptake of nanoparticles by MDCKII cells.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Bioact Mater. 2023 Sep, 337-347.
- Chem Eng J. 2024 Feb 1, 481, 148614.
- Cancer Nanotechnol. 2023 May 9.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Rivolta I, et al. Cellular uptake of coumarin-6 as a model drug loaded in solid lipid nanoparticles. J Physiol Pharmacol. 2011 Feb;62(1):45-53.

[2]. Miao X, et al. Transport Mechanism of Coumarin 6 Nanocrystals with Two Particle Sizes in MDCKII Monolayer and Larval Zebrafish. ACS Appl Mater Interfaces. 2016 May 25;8(20):12620-30.

[3]. Purr E, et al. Preparation of PLGA Nanoparticles Encapsulated with Fluorescent Probe Coumarin-6[J]. bioRxiv, 2019: 614875.

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