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Produktinformation

- Forschungsprodukte & Biochemikalien
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- Diagnostik & molekulare Diagnostik
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See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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7ACC1

Cat. No.: HY-D0067

CAS No.: 50995-74-9

Molecular Formula: $C_{14}H_{15}NO_4$

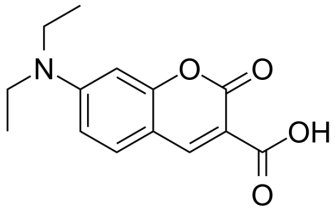
Molecular Weight: 261.27

Target: Monocarboxylate Transporter

Pathway: Membrane Transporter/Ion Channel

Storage: 4°C, protect from light

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



SOLVENT & SOLUBILITY

In Vitro

DMSO : 33.33 mg/mL (127.57 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.8275 mL	19.1373 mL	38.2746 mL
	5 mM	0.7655 mL	3.8275 mL	7.6549 mL
	10 mM	0.3827 mL	1.9137 mL	3.8275 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 (9.57 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

7ACC1(DEAC; Coumarin D 1421; D 1421) selectively interfere with lactate fluxes in the lactate-rich tumor microenvironment; inhibits lactate influx but not efflux in tumor cells expressing MCT1 and MCT4 transporters.IC50 value: 0.86 uM(Lactate uptake inhibition) [1]Target: MCT inhibitor; lactate transport inhibitorContrary to the reference MCT1 inhibitor AR-C155858, 7ACC unexpectedly inhibited lactate influx but not efflux in tumor cells expressing MCT1 and MCT4 transporters. 7ACC delayed the growth of cervix SiHa tumors, colorectal HCT116 tumors, and orthoptopic MCF-7 breast tumors. MCT target engagement was confirmed by the lack of activity of 7ACC on bladder UM-UC-3 carcinoma that does not express functional MCT. 7ACC also inhibited SiHa tumor relapse after treatment with cisplatin. Finally, we found that contrary to AR-C155858, 7ACC did not prevent the cell entry of the substrate-mimetic drug 3-bromopyruvate (3BP) through MCT1, and contributed to the inhibition of tumor relapse after 3BP treatment.

CUSTOMER VALIDATION

- Cell Metab. 2021 Sep 8;S1550-4131(21)00375-2.
- Microbiome. 2022 Dec 15;10(1):226.
- J Biol Chem. 2021 Dec 29;101554.
- Cancer Cell Int. 2019 Jun 28;19:170.
- Cancer Med. 2018 Sep;7(9):4690-4700.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Draoui N, et al. Antitumor activity of 7-aminocarboxycoumarin derivatives, a new class of potent inhibitors of lactate influx but not efflux. Mol Cancer Ther. 2014 Jun;13(6):1410-8.

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