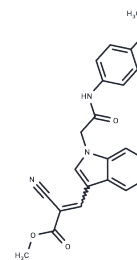


MCT1-IN-3

Chemical Properties

CAS No. :	2878360-80-4
Formula:	C ₂₂ H ₁₉ N ₃ O ₄
Molecular Weight:	389.4
Storage:	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	MCT1-IN-3 is a monocarboxylate transporter 1 (MCT1) inhibitor, targeting solute carrier (SLC) monocarboxylate transporter 1 (MCT1; SLC16A1) for cancer treatment. MCT1-IN-3 (compound 24) showed the highest MCT1 transport inhibition with an IC ₅₀ value of 81.0 Nm and also exhibits significant inhibitory activity against the multidrug transporter ABCB1.
Targets(IC ₅₀)	Monocarboxylate transporter,P-gp
In vitro	MCT1-IN-3 has great antiproliferative activities against the MCT1-expressing cancer cell lines A-549 and MCF-7 with GI ₅₀ values of 20 μM and 15.1 μM, respectively. Treatment with MCT1-IN-3 5μM for 24 h significantly leads to cancer cell cycle arrest as well as apoptosis, which has also significant inhibitory power against the multidrug transporter ABCB1 and shows to reverse ABCB1-mediated multidrug resistance (MDR)[1].

Solubility Information

Solubility	DMSO: 22.5 mg/mL (57.78 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5681 mL	12.8403 mL	25.6805 mL
5 mM	0.5136 mL	2.5681 mL	5.1361 mL
10 mM	0.2568 mL	1.284 mL	2.5681 mL
50 mM	0.0514 mL	0.2568 mL	0.5136 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

Puri S, et al. Indole Derivatives as New Structural Class of Potent and Antiproliferative Inhibitors of Monocarboxylate Transporter 1 (MCT1; SLC16A1). J Med Chem. 2023 Jan 12;66(1):657-676.

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