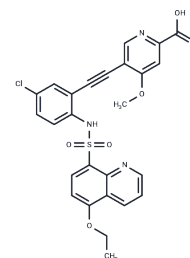


MSC-4381

Chemical Properties

CAS No. :	2445185-57-7
Formula:	C ₂₆ H ₂₀ ClN ₃ O ₆ S
Molecular Weight:	537.97
Storage:	Keep away from moisture Powder: -20°C for 3 years In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



Biological Description

Description	MSC-4381 (MCT4-IN-1) is an orally available and selectively modeled highly potent inhibitor of monocarboxylic acid transporter protein 4 (MCT4/SLC16A3) with potential anticancer and antitumor activity for the study of osteosarcoma.
Targets(IC50)	Monocarboxylate transporter
In vitro	MCT4-IN-1 (compound 18n) inhibits lactate efflux in the MDA-MB-231 cell line with an IC50 of 1 nM. On-target activity was confirmed by fluorescence cross correlation spectroscopy (FCCS)[1] with a Ki of 11 nM[1].
In vivo	When MCT4-IN-1 (30 mg/kg; oral; single dose) was used only in combination with MCT1/2 inhibitors, lactic acid accumulation in tumor cells was significant; MCT4-IN-1 (30 mg/kg/day; for 15 consecutive days) had no significant antitumor activity; MCT4-IN-1 (0.2 mg/kg; intravenous injection) had a T1/2 of 1 hour, a CL of 0.33 L/hkg, a Cmax of 489 ng/mL, and a Vss of 0.4 L/kg in mice[1].

Solubility Information

Solubility	DMSO: 50 mg/mL (92.94 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 2.5 mg/mL (4.65 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8588 mL	9.2942 mL	18.5884 mL
5 mM	0.3718 mL	1.8588 mL	3.7177 mL
10 mM	0.1859 mL	0.9294 mL	1.8588 mL
50 mM	0.0372 mL	0.1859 mL	0.3718 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

Timo Heinrich, et al. Discovery of 5-{2-[5-Chloro-2-(5-ethoxyquinoline-8-sulfonamido)phenyl]ethynyl}-4-methoxypyridine-2-carboxylic Acid, a Highly Selective in Vivo Useable Chemical Probe to Dissect MCT4 Biology. *J Med Chem.* 2021 Aug 26;64(16):11904-11933.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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