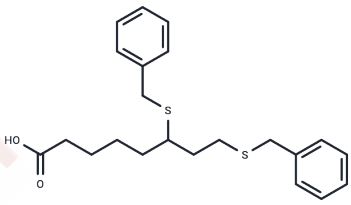
Data Sheet (Cat.No.T6157)

TargetMol

Devimistat

Chemical Properties



CAS No. : 95809-78-2

Formula: C22H28O2S2

Molecular Weight: 388.59

Storage: Store at low temperature
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	Devimistat (6,8-Bis(benzylthio)octanoic acid) , a lipoate analog, inhibits mitochondrial enzymes pyruvate dehydrogenase (PDH) and α-ketoglutarate dehydrogenase, disrupts tumor cell mitochondrial metabolism. It has potential chemopreventive and antineoplastic activities, and has been used in trials studying the treatment of Cancer, Lymphoma, Solid Tumors, Advanced Cancer, and Pancreatic Cancer, among others.
Targets(IC50)	Apoptosis,Mitochondrial Metabolism,Dehydrogenase
In vitro	In vitro, Devimistat produces the selective toxicity against several tumor cell lines including H460 human lung cancer cells and Saos-2 human sarcoma cells with EC50 of 120 μM and 120 μM, respectively. Devimistat disrupts H460 cancer cell mitochondrial metabolism including inhibition of PDH complex activity and loss of mitochondrial membrane potential in a time- and drug dose-dependent fashion. In addition, Devimistat (240 μM) also induces both apoptotic and non-apoptotic cell death in H460 human lung cancer and Saos-2 human sarcoma cells. [1]
In vivo	Devimistat (25 mg/kg) has potent anticancer activity in a human tumor xenograft model of of a pancreatic tumor cell (BxPC-3). Similarly, Devimistat (10 mg/kg) also produces significant tumor growth inhibition of H460 human non-small cell lung carcinoma in mouse model. Besides, Devimistat produces little or no side-effect toxicity in expected therapeutic dose ranges in large animal models and has the maximum tolerated dose of 100 mg/kg in mice. [1]

Solubility Information

Solubility	Ethanol: 78 mg/mL (200.73 mM),Sonication is recommended. DMSO: 250 mg/mL (643.35 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.15 mM),Sonication is recommended. *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.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5734 mL	12.867 mL	25.7341 mL
5 mM	0.5147 mL	2.5734 mL	5.1468 mL
10 mM	0.2573 mL	1.2867 mL	2.5734 mL
50 mM	0.0515 mL	0.2573 mL	0.5147 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

Zachar Z, et al. J Mol Med (Berl). 2011, 89(11), 1137-1148.