Devimistat

Cat. No.: HY-15453

CAS No.: 95809-78-2

Molecular Formula: $C_{22}H_{28}O_2S_2$

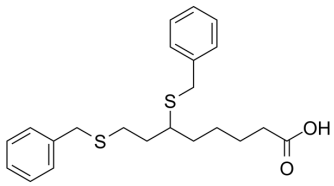
Molecular Weight: 388.59

Target: Apoptosis; Mitochondrial Metabolism

Pathway: Apoptosis; Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (257.34 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.5734 mL	12.8670 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

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: ≥ 2.08 mg/mL (5.35 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (5.35 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.35 mM); Clear solution
4. Add each solvent one by one: 2% DMSO >> 40% PEG300 >> 5% Tween-80 >> 53% saline
   Solubility: 2 mg/mL (5.15 mM); Suspended solution; Need ultrasonic
5. Add each solvent one by one: 2% DMSO >> 98% (20% SBE-β-CD in saline)
   Solubility: ≥ 2 mg/mL (5.15 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Devimistat (CPI-613) is a mitochondrial metabolism inhibitor. Devimistat is a lipoic acid antagonist that abrogates mitochondrial energy metabolism to induce apoptosis in various cancer cells[1].

IC_{50} & Target	mitochondrial metabolism[1]
In Vitro	Devimistat induces apoptosis of GPM-2 gastric cancer cells. Devimistat targets the altered form of mitochondrial energy metabolism utilized by tumor cells. The change in mitochondrial enzyme activities and cellular redox status induced by devimistat leads to cell death, including apoptosis[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cell Rep. 2022 Feb 15;38(7):110391.
- Elife. 2020 Jun 2;9:e54954.
- Cancers (Basel). 2022 Jun 16;14(12):2983.
- Commun Biol. 2021 Nov 16;4(1):1289.

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REFERENCES

[1]. Sakuratani T, et al. Downregulation of ARID1A in gastric cancer cells: a putative protective molecular mechanism against the Harakiri-mediated apoptosis pathway. Virchows Arch. 2021;478(3):401-411.

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