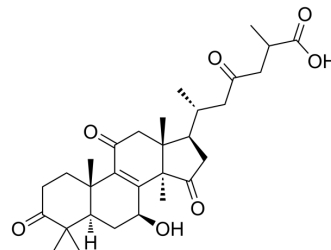


Ganoderic acid D

Cat. No.:	HY-N1511		
CAS No.:	108340-60-9		
Molecular Formula:	C ₃₀ H ₄₂ O ₇		
Molecular Weight:	514.65		
Target:	Sirtuin; Apoptosis		
Pathway:	Cell Cycle/DNA Damage; Epigenetics; Apoptosis		
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 (194.31 mM; Need ultrasonic)
 H₂O : 0.1 mg/mL (0.19 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	1.9431 mL	9.7153 mL	19.4307 mL
	5 mM	0.3886 mL	1.9431 mL	3.8861 mL
	10 mM	0.1943 mL	0.9715 mL	1.9431 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
 Solubility: ≥ 2.5 mg/mL (4.86 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
 Solubility: ≥ 2.5 mg/mL (4.86 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
 Solubility: ≥ 2.5 mg/mL (4.86 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Ganoderic acid D, a highly oxygenated tetracyclic triterpenoid, is the major active component of *Ganoderma lucidum*. Ganoderic acid D upregulates the protein expression of SIRT3 and induces the deacetylated cyclophilin D (CypD) by SIRT3. Ganoderic acid D inhibits the energy reprogramming of colon cancer cells including glucose uptake, lactate production, pyruvate and acetyl-coenzyme production in colon cancer cells^[1]. Ganoderic acid D induces HeLa human cervical carcinoma apoptosis^[2].

IC ₅₀ & Target	SIRT3								
In Vitro	<p>Ganoderic acid D can inhibit the growth of numerous cancer cell lines and it inhibits HeLa human cervical carcinoma cells with an IC₅₀ of 17.3 mM^[2]. Ganoderic acid D (1-50 μM; 24-72 hours) reduces the cell survival rate in a dose- and time-dependent manner^[2].</p> <p>Ganoderic acid D (10, 50 μM; 24, 48 hours) induces G2/M phase arrest^[2].</p> <p>Ganoderic acid D (10, 50 μM; 24, 48 hours) induces a morphological change typical of apoptosis in HeLa cells^[2].</p> <p>Ganoderic acid D (10 μM; 48 hours) up-regulates 14-3-3E and PRDX3^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Viability Assay^[2]</p>								
	<table border="1"> <tr> <td>Cell Line:</td> <td>HeLa human cervical carcinoma cell line (CCL-2)</td> </tr> <tr> <td>Concentration:</td> <td>1, 5, 10, 20, 50 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>24, 48, 72 hours</td> </tr> <tr> <td>Result:</td> <td>Reduced the cell survival rate in a dose- and time-dependent manner and had an IC₅₀ value of 17.3 μM for 48 hours treatment.</td> </tr> </table>	Cell Line:	HeLa human cervical carcinoma cell line (CCL-2)	Concentration:	1, 5, 10, 20, 50 μM	Incubation Time:	24, 48, 72 hours	Result:	Reduced the cell survival rate in a dose- and time-dependent manner and had an IC ₅₀ value of 17.3 μM for 48 hours treatment.
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	Concentration:	1, 5, 10, 20, 50 μM							
	Incubation Time:	24, 48, 72 hours							
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	<p>Cell Cycle Analysis^[2]</p>								
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CUSTOMER VALIDATION

- Front Pharmacol. 2022 Feb 21:13:826716.

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REFERENCES

- [1]. Liu Z, et al. Effect of ganoderic acid D on colon cancer Warburg effect: Role of SIRT3/cyclophilin D. Eur J Pharmacol. 2018 Apr 5;824:72-77.
- [2]. Yue QX, et al. Proteomics characterization of the cytotoxicity mechanism of ganoderic acid D and computer-automated estimation of the possible drug target network. Mol Cell Proteomics. 2008 May;7(5):949-61.
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Caution: Product has not been fully validated for medical applications. For research use only.

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