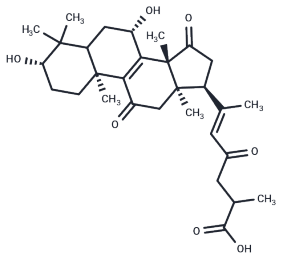
Data Sheet (Cat.No.T2S1120)

TargetMol

Ganoderenic acid B

Chemical Properties



CAS No. : 100665-41-6

Formula: C30H42O7

Molecular Weight: 514.65

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	Ganoderenic acid B, a natural product derived from Ganoderma lucidum, can work by inhibiting the transport function of ABCB1 and enhancing the cytotoxicity of chemotherapy drugs against AbCB1-mediated multidrug resistant cancer cells.
Targets(IC50)	P-gp
In vitro	Ganoderenic acid B, a lanostane-type triterpene isolated from Ganoderma lucidum, exhibited potent reversal effect on ABCB1-mediated multidrug resistance of HepG2/ADM cells to doxorubicin, vincristine and paclitaxel. Similarly, Ganoderenic acid B could also significantly reverse the resistance of ABCB1-overexpressing MCF-7/ADR cells to doxorubicin. Furthermore, Ganoderenic acid B notably enhanced intracellular accumulation of rhodamine-123 in HepG2/ADM cells through inhibition of its efflux. ABCB1 siRNA interference assay indicated that the reversal activity of Ganoderenic acid B was dependent on ABCB1. Further mechanistic investigations found that Ganoderenic acid B did not alter the expression level of ABCB1 and the activity of ABCB1 ATPase. Molecular docking model displayed that the positions of Ganoderenic acid B binding to ABCB1 were different from the region of verapamil interacted with ABCB1. Ganoderenic acid B can enhance the cytotoxicity of chemotherapeutics towards ABCB1-mediated MDR cancer cells via inhibition of the transport function of ABCB1. These findings provide evidence that Ganoderenic acid B has the potential to be developed into an ABCB1-mediated multidrug resistance reversal agent.[1]

Solubility Information

Solubility	DMSO: 90 mg/mL (174.88 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: 3.3 mg/mL (6.41 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	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
50 mM	0.0389 mL	0.1943 mL	0.3886 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

Liu DL, et al. Ganoderma lucidum derived ganoderenic acid B reverses ABCB1-mediated multidrug resistance in HepG2/ADM cells. Int J Oncol. 2015;46(5):2029-2038.