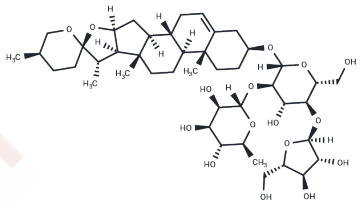
Data Sheet (Cat.No.T3895)

TargetMol

Polyphyllin I

Chemical Properties



CAS No. : 50773-41-6

Formula: C44H70O16

Molecular Weight: 855.02

Storage: 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	Polyphyllin D induces apoptosis via the mitochondrial apoptotic pathway as evidenced by decreased Bcl-2 expression levels, disruption of MMP and increased Bax, cytochrome C, and cleaved-caspase-3 levels. Polyphyllin D has an anti-angiogenic effect. Polyphyllin D has toxicity in human RBCs as well as its underlying mechanism for the hemolysis and eryptosis/erythroptosis. Polyphyllin D has strong anticancer activity, can overcome drug resistance in R-HepG2 cells and elicit programmed cell death via mitochondrial dysfunction.
Targets(IC50)	Apoptosis,Akt,PDK,Autophagy,JNK,mTOR

Solubility Information

Solubility	DMSO: 250 mg/mL (292.39 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: 1 mg/mL (1.17 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	1.1696 mL	5.8478 mL	11.6956 mL
5 mM	0.2339 mL	1.1696 mL	2.3391 mL
10 mM	0.117 mL	0.5848 mL	1.1696 mL
50 mM	0.0234 mL	0.117 mL	0.2339 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

Wu L,et al. Polyphyllin D induces apoptosis in K562/A02 cells through G2/M phase arrest.Wu L1, Li Q, Liu Y.J Pharm Pharmacol. 2014 May;66(5):713-21.
Zhang D, Tian X, Wang Y, et al.Polyphyllin I ameliorates gefitinib resistance and inhibits the VEGF/VEGFR2/p38 pathway by targeting HIF-1a in lung adenocarcinoma.Phytomedicine.2024: 155690.
Yu Q,et al. Polyphyllin D induces apoptosis in U87 human glioma cells through the c-Jun NH2-terminal kinase pathway. J Med Food. 2014 Sep;17(9):1036-42.

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