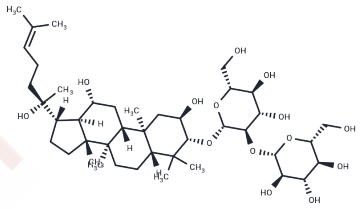
Data Sheet (Cat.No.TN1721)

TargetMol

Gypenoside L

Chemical Properties



CAS No. : 94987-09-4

Formula: C42H72O14

Molecular Weight: 801.01

Storage: Store at low temperature,Keep away from direct sunlight
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	Gypenoside L is a saponin that can be found in Gynostemma pentaphyllum. Gypenoside L increases the SA-β-galactosidase activity, promotes the production of senescence-associated secretory cytokines. Gypenoside L also can activate p38 and ERK MAPK pathways and NF-κB pathway to induce senescence. Gypenoside L exhibits anti-tumor and anti-inflammatory activities.
Targets(IC50)	ERK,Calcium Channel,NF-κB,p38 MAPK,ROS
In vitro	gypenoside L (Gyp-L), a saponin isolated from Gynostemma pentaphyllum, on cancer cell growth.?We found that Gyp-L increased the SA-β-galactosidase activity, promoted the production of senescence-associated secretory cytokines, and inhibited cell proliferation of human liver and esophageal cancer cells.?Moreover, Gyp-L caused cell cycle arrest at S phase, and activated senescence-related cell cycle inhibitor proteins (p21 and p27) and their upstream regulators.?In addition, Gyp-L activated p38 and ERK MAPK pathways and NF-κB pathway to induce senescence.?Consistently, adding chemical inhibitors efficiently counteracted the Gyp-L-mediated senescence, growth inhibition, and cell cycle arrest in cancer cells.?Furthermore, treatment with Gyp-L, enhanced the cytotoxicity of clinic therapeutic drugs, including 5-fluorouracil and cisplatin, on cancer cells.?Overall, these results indicate that Gyp-L inhibits proliferation of cancer cells by inducing senescence and renders cancer cells more sensitive to chemotherapy[1].

Solubility Information

Solubility	DMSO: 166.67 mg/mL (208.07 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: 4 mg/mL (4.99 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	1.2484 mL	6.2421 mL	12.4842 mL
5 mM	0.2497 mL	1.2484 mL	2.4968 mL
10 mM	0.1248 mL	0.6242 mL	1.2484 mL
50 mM	0.025 mL	0.1248 mL	0.2497 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

Jingxin Ma , Xiaopeng Hu , Chenghui Liao,et al. Gypenoside L Inhibits Proliferation of Liver and Esophageal Cancer Cells by Inducing Senescence.[J]. Molecules (Basel, Switzerland), 2019.

Dammarane-type saponins from heat-processed Gynostemma pentaphyllum show fortified activity against A549 cells. Archives of Pharmacal Research, 2013, 36(7):874-879.