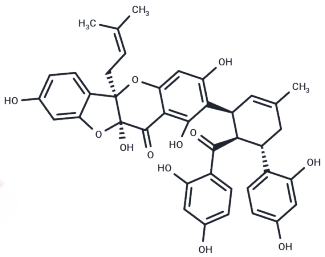
Data Sheet (Cat.No.T4S1615)

TargetMol

Sanggenon C

Chemical Properties



CAS No. : 80651-76-9

Formula: C40H36O12

Molecular Weight: 708.71

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	Sanggenon C is a flavanone Diels-Alder adduct compound isolated from the root bark of Morus alba. Sanggenon C can inhibit NF-κB activity, inhibit the expression of inducible nitric oxide synthase in RAW264.7 cells, and inhibit tumor necrosis factor-α-stimulated cell adhesion and vascular cell adhesion molecule-1 expression; Sanggenon C also has antioxidant and anti-inflammatory effects, and also has the effect of inhibiting pancreatic lipase. [1,2]
Targets(IC50)	Apoptosis,ERK,NF-κB,Phosphatase
In vitro	**METHODS**: Appropriate concentrations of Sanggenon C (10 and 20 μM) were administered to U-87MG and LN-229, as well as dimethyl sulfoxide (DMSO) as a control, for 48 hours. Cell viability was determined by MTT assay. **RESULTS** Sanggenon C inhibited the cell proliferation of GBM cell lines U-87 MG and LN-229 in a concentration-dependent manner.[1] **METHODS**: U-87 MG and LN-229 cells were treated with Sanggenon C (10 μM), cell apoptosis was detected by flow cytometry, and the expression levels of related proteins were analyzed by Western blot. **RESULTS** Silencing of DAPK1 reduced Sanggenon C-induced cell apoptosis. Western blot analysis further showed that in GBM cells treated with Sanggenon C, the protein levels of C-PARP and C-Caspase3 were reduced by silencing DAPK1. [1] **METHODS**: Human colon cancer cell line (HT-29) was treated with Sanggenon C (0, 5, 10, 20, 40 and 80 μM) for 0, 12, 24, 48 or 72 h. As a measure of intracellular ROS and ATP, the production of NO in cells was measured by the Griess method according to the instructions of the NO detection kit. **RESULTS** Sanggenon C can increase the level of intracellular ROS in human colon cancer cells, and this accumulation is enhanced when the dose is increased; Sanggenon C can interfere with the level of intracellular ROS; Sanggenon C can interfere with and increase the levels of intracellular Ca2+ and ATP, both in a time-dependent manner, and this accumulation is enhanced when the dose is increased; Sanggenon C can significantly interfere with and inhibit the production of NO in a dose- and time-dependent manner. [2]
In vivo	**METHODS**: Mice were intraperitoneally injected with Sanggennaon C (10 mg, 20 mg/kg/day) for 3 weeks. Four weeks after surgery, the hearts, lungs, and tibiae of the mice were dissected and weighed or measured, and the heart weight (HW)/body weight

In vivo	(BW) (mg/g), HW/tibia length (TL) (mg/mm), and lung weight (LW)/BW (mg/g) ratios were compared among the different groups. **RESULTS** Sanggennaon C treatment prevented the development of ventricular dysfunction, such as decreased left ventricular end-diastolic diameter, left ventricular end-systolic diameter, and increased LVFS and LVEF; Sanggennaon C-treated mice showed attenuated cardiac hypertrophy, such as decreased CSA, and reduced HW/BW and HW/TL ratios. [2]

Solubility Information

Solubility	DMSO: 150 mg/mL (211.65 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: < 10 mg/mL (14.11 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: < 10 mg/mL (14.11 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+90% (20% SBE-β-CD in Saline): 10 mg/mL (14.11 mM),Suspension. *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	1.411 mL	7.0551 mL	14.1101 mL
5 mM	0.2822 mL	1.411 mL	2.822 mL
10 mM	0.1411 mL	0.7055 mL	1.411 mL
50 mM	0.0282 mL	0.1411 mL	0.2822 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

Chang H, et al. Sanggenon C inhibits cell proliferation and induces apoptosis by regulating the MIB1/DAPK1 axis in glioblastoma. MedComm (2020). 2023 Jun 19;4(4):e281.
Liu X, Zhu Y, Wang D, et al.The natural compound Sanggenon C inhibits PRRSV infection by regulating the TRAF2/NF-κB signalling pathway.Veterinary Research.2023, 54(1): 1-16.
Xiao L, et al. Sanggenon C protects against pressure overload-induced cardiac hypertrophy via the calcineurin/NFAT2 pathway. Mol Med Rep. 2017 Oct;16(4):5338-5346.
Liu X, Meng Y, He J, et al.Natural compound Sanggenon C inhibits porcine reproductive and respiratory syndrome virus replication in piglets.Veterinary Microbiology.2024, 290: 109991.