Sanggenon C

Cat. No.: HY-N0617

CAS No.: 80651-76-9

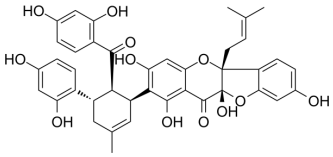
Molecular Formula: $C_{40}H_{36}O_{12}$

Molecular Weight: 708.71

Target: NF-κB; Phosphatase; Apoptosis; ERK

Pathway: NF-κB; Metabolic Enzyme/Protease; Apoptosis; MAPK/ERK Pathway; Stem Cell/Wnt

Storage: -20°C, sealed storage, away from moisture and light
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (141.10 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.4110 mL	7.0551 mL	14.1101 mL
	5 mM	0.2822 mL	1.4110 mL	2.8220 mL
	10 mM	0.1411 mL	0.7055 mL	1.4110 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (3.53 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Sanggenon C, a flavonoid, exerts protective effects against cardiac hypertrophy and fibrosis via suppression of the calcineurin/NFAT2 pathway. Sanggenon C inhibits mitochondrial fission to induce apoptosis by blocking the ERK signaling pathway. Sanggenon C inhibits inducible nitric oxide synthase expression in RAW264.7 cells, and TNF-α-stimulated cell adhesion and VCAM-1 expression, by suppressing NF-κB activity. Sanggenon C possesses antioxidant, anti-inflammatory and antitumor activities[1][2].

IC_{50} & Target		
	NF-κB	ERK

In Vitro

Sanggenon C (4-12 μM; 24 h) inhibits the proliferation of human gastric cancer (GC) cells and greatly reduces the number of GC cell colonies formed[2].
Sanggenon C (6-10 μM; 24 h) inhibits cell cycle arrest and apoptosis of GC cells[2].
Sanggenon C (6-10 μM; 24 h) markedly downregulates the levels of p-ERK[2].
Sanggenon C (6-10 μM; 24 h) induces mitochondrial dysfunction of GC cells[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay[2]

Cell Line:	Human GC cell lines HGC-27 and AGS cells
Concentration:	4-12 μM
Incubation Time:	24 h
Result:	Inhibited the proliferation of GC cells in a dose-dependent manner. The IC_{50} values of were 9.129 μM for HGC-27 and 9.863 μM for AGS.

Cell Cycle Analysis[2]

Cell Line:	Human GC cell lines HGC-27 and AGS cells
Concentration:	6, 8, 10 μM
Incubation Time:	24 h
Result:	The proportions of cells in the G0-G1 phase were increased and the levels of CDK4 and cyclin D1 were decreased.

Apoptosis Analysis[2]

Cell Line:	Human GC cell lines HGC-27 and AGS cells
Concentration:	6, 8, 10 μM
Incubation Time:	24 h
Result:	Exhibited a dose-dependent induction of apoptosis, with the percentage of apoptotic cells increasing from 7.3% to 24.8% and from 4.6% to 15.1% for HGC-27 and AGS cells, respectively.

Western Blot Analysis[2]

Cell Line:	Human GC cell lines HGC-27 and AGS cells
Concentration:	6, 8, 10 μM
Incubation Time:	24 h
Result:	The levels of p-ERK were markedly downregulated.

In Vivo

Sanggenon C (10, 20 mg/kg/day; Intraperitoneally; for 3 weeks) improves impaired cardiac function following aortic banding (AB). Sanggenon C protects against cardiac hypertrophy[1].
Sanggenon C (10, 20 mg/kg/day; Intraperitoneally; for 21 days) suppresses the tumor burden in the nude mice bearing tumor xenografts derived from AGS. Sanggenon C downregulates levels of p-ERK expression[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male C57/BL6 mice (weight 23.5-27.5 g; age, 8 weeks)[1]
Dosage:	10, 20 mg/kg
Administration:	Intraperitoneally; daily; for 3 weeks

Result:	Prevented the development of ventricular dysfunction, as evidenced by decreased LV end-diastolic diameter, LV end-systolic diameter, and increased LVFS and LVEF.

CUSTOMER VALIDATION

- J Nat Prod. 2022 Oct 18.
- Trop J Pharm Res. 2023 Aug 31; 22(8):1553-1559.

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REFERENCES

[1]. Xiao-Jie Chen, et al. Sanggenon C Suppresses Tumorigenesis of Gastric Cancer by Blocking ERK-Drp1-Mediated Mitochondrial Fission. J Nat Prod. 2022 Oct 28;85(10):2351-2362.

[2]. 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.

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