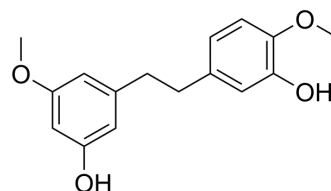


Gigantol isomer-1

Cat. No.:	HY-N2523		
CAS No.:	67884-30-4		
Molecular Formula:	C ₁₆ H ₁₈ O ₄		
Molecular Weight:	274.31		
Target:	Wnt		
Pathway:	Stem Cell/Wnt		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (364.55 mM)
 Ethanol : 50 mg/mL (182.28 mM; Need ultrasonic)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	3.6455 mL	18.2276 mL	36.4551 mL
	5 mM	0.7291 mL	3.6455 mL	7.2910 mL
	10 mM	0.3646 mL	1.8228 mL	3.6455 mL

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

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (9.11 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (9.11 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (9.11 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Gigantol isomer-1 is a bibenzyl compound derived from *Dendrobium nobile*. Gigantol isomer-1 shows promising therapeutic potential against cancer cells. Gigantol isomer-1 is a novel inhibitor of the Wnt/β-catenin pathway.

IC₅₀ & Target

Wnt^[1]

In Vitro	Gigantol isomer-1 decreases the level of phosphorylated LRP6 and cytosolic β -catenin in HEK293 cells. In breast cancer MDA-MB-231 and MDA-MB-468 cells, treatment with Gigantol isomer-1 reduces the level of phosphorylated LRP6 ^[1] . Gigantol isomer-1 significantly inhibits the proliferation and induces apoptosis of the HepG2 cells. Gigantol isomer-1 at concentrations of 1, 40 and 150 μ M markedly decreases the cell viability by 11.7, 30.0 and 56.4% at 24 h and 21.1, 66.8 and 85.5% at 48 h, respectively. The IC ₅₀ value is 9.30 μ M ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	LDD and Gigantol isomer-1 (25–100 mg/kg, p.o.) significantly increase the hot-plate latency in comparison to vehicle-treated mice and decreased carrageenan-induced inflammation in rats ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay ^[2]	HepG2 cells are treated with a series of concentrations of Gigantol (1, 10, 40, 80 and 150 μ M) for different time intervals (12, 24 and 48 h). The cytotoxicity is measured using MTT assays ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Animal Administration ^[3]	<p>Rats^[3]</p> <p>The anti-inflammatory activity is determined by carrageenan-induced edema test in the hind paws of rats. Sprague-Dawley rats are fasted for 15 h before the experiment with free access to water. One hundred microlitres of 1% carrageenan (10 mg/mL, Type IV, lambda) suspension is prepared 30 min before each experiment and injected into the plantar side of right hindpaw of the rats. The CH₂Cl₂-MeOH Scaphyglottis livida and Maxillaria densa extracts (150–600 mg/kg), as well as compound LDD and gigantol (25–100 mg/kg), are orally administered. The extracts, LDD and gigantol are administered 1 h before the carrageenan treatment^[3].</p> <p>Mice^[3]</p> <p>Mice receive an oral administration of vehicle (0.2% Tween-80) or increasing doses of Scaphyglottis livida and Maxillaria densa extracts (150–600 mg/kg) or LDD and gigantol (25–100 mg/kg) 30 min before the thermal noxious stimuli in the hot-plate test. Morphine (1.5–6 mg/kg, p.o.) is used as positive control. Mice are observed before and at 30, 60, 90 and 120 min after drugs administration^[3].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

CUSTOMER VALIDATION

- Oncotargets Ther. 2020 Nov 4;13:11337-11346.

See more customer validations on www.MedChemExpress.com

REFERENCES

- [1]. Yu S, et al. Gigantol inhibits Wnt/ β -catenin signaling and exhibits anticancer activity in breast cancer cells. BMC Complement Altern Med. 2018 Feb 14;18(1):59.
- [2]. Chen H, et al. Gigantol attenuates the proliferation of human liver cancer HepG2 cells through the PI3K/Akt/NF- κ B signaling pathway. Oncol Rep. 2017 Feb;37(2):865-870.
- [3]. Déciga-Campos M, et al. Antinociceptive and anti-inflammatory effects of compounds isolated from Scaphyglottis livida and Maxillaria densa. J Ethnopharmacol. 2007 Nov 1;114(2):161-8.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA