Leachianone A

Cat. No.: HY-N2281

CAS No.: 97938-31-3

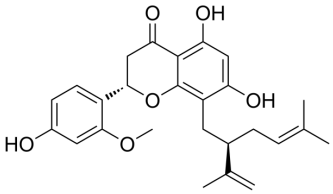
Molecular Formula: $C_{26}H_{30}O_6$

Molecular Weight: 438.51

Target: Apoptosis

Pathway: Apoptosis

Storage: 4°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 : 8.27 mg/mL (18.86 mM; Need ultrasonic and warming)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.2804 mL	11.4022 mL	22.8045 mL
	5 mM	0.4561 mL	2.2804 mL	4.5609 mL
	10 mM	0.2280 mL	1.1402 mL	2.2804 mL

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

BIOLOGICAL ACTIVITY

Description

Leachianone A, isolated from Radix Sophorae, has anti-malarial, anti-inflammatory, and cytotoxic potent[1]. Leachianone A induces apoptosis involved both extrinsic and intrinsic pathways[2].

In Vitro

Leachianone A (0-20 μg/ml; 24-72 hours) exhibits a marked inhibition on the survival of HepG2 cells time- and dose-dependently manner, IC_{50} values are 6.9 μg/ml, 3.4 μg/ml and 2.8 μg/ml in cells with 24-, 48- and 72-hours treatment, respectively[1].

Leachianone A (10-30 μg/ml; 48 hours) indicates that at low concentration of LA (10 μg/ml), a substantial amount of cells is primarily in the early phase of apoptosis, at higher concentrations, induces a shift of the cell population to late apoptotic/necrotic stage[1].

Leachianone A (10-30 μg/ml; 48 hours) decreases the precursor of caspase-3 in a dose-dependent manner, reduces the protein level of the pro-forms of upstream initiator caspases, caspases-8 and -9, decreases two downstream substrates, namely inhibitor of caspase-activated DNase(ICAD) and poly-ADP-ribose polymerase (PARP) in HepG2 cells[1].

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

Cell Viability Assay[1]

Cell Line:	HepG2 cells

Concentration:	0 μg/ml, 2 μg/ml, 4 μg/ml, 6 μg/ml, 8 μg/ml, 10 μg/ml, 12 μg/ml, 14 μg/ml, 16 μg/ml, 18 μg/ml, 20 μg/ml
Incubation Time:	24-72 hours
Result:	Inhibited HepG2 cells survival.

Apoptosis Analysis[1]

Cell Line:	HepG2 cells
Concentration:	48 hours
Incubation Time:	10, 20, and 30 μg/ml
Result:	Induced the proportion of annexin V-stained cells in both the early and late apoptotic stage.

Western Blot Analysis[1]

Cell Line:	HepG2 cells
Concentration:	48 hours
Incubation Time:	10, 20, and 30 μg/ml
Result:	Decreased the protein expression of caspase-3, caspases-8 and -9, reduced ICAD and PARP protein expression.

In Vivo

Leachianone A (intravenously injection; 20 mg/kg, 30 mg/kg; once daily; 30 days) significantly diminishes the tumor volume by 17-54% in LA-treated nude mice, when compared with those solely given the vehicle[1].

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

Animal Model:	Male nude mice with human hepatoma HepG2 cells[1]
Dosage:	20 mg/kg; 30 mg/kg
Administration:	Intravenously injection; 20 mg/kg, 30 mg/kg; once daily; 30 days
Result:	Suppressed the tumor growth in vivo.

REFERENCES

[1]. Jeong GS, et al. Lavandulyl flavanones from Sophora flavescens protect mouse hippocampal cells against glutamate-induced neurotoxicity via the induction of heme oxygenase-1. Biol Pharm Bull. 2008 Oct;31(10):1964-7.

[2]. Cheung CS, et al. Leachianone A as a potential anti-cancer drug by induction of apoptosis in human hepatoma HepG2 cells. Cancer Lett. 2007 Aug 18;253(2):224-35. Epub 2007 Mar 26.

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