Aspidin BB

Cat. No.: HY-108164

CAS No.: 584-28-1

Molecular Formula: $C_{25}H_{32}O_8$

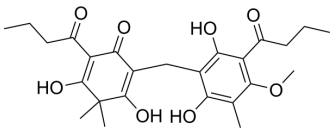
Molecular Weight: 460.52

Target: Apoptosis; Bcl-2 Family; Caspase

Pathway: Apoptosis

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 : 12.5 mg/mL (27.14 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.1715 mL	10.8573 mL	21.7146 mL
	5 mM	0.4343 mL	2.1715 mL	4.3429 mL
	10 mM	0.2171 mL	1.0857 mL	2.1715 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 1.25 mg/mL (2.71 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1.25 mg/mL (2.71 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Aspidin BB is a phloroglucinol derivative, which can be isolated from the aerial part of Dryopteris championii. Aspidin BB has anticancer activity. Aspidin BB induces cell cycle arrest and apoptosis in human ovarian HO-8910 cells[1][2].

IC_{50} & Target			
	Bcl-2	Bax	Caspase-3

In Vitro

Aspidin BB (0-100 μM, 24-72 h) significantly inhibits HO-8910 cell proliferation in a dose- and time-dependent manner. The IC_{50} values are 15.02, 25.79 and 68.81 μM after 72, 48 and 24 h treatment, respectively[1].

Aspidin BB suppresses Bcl-2 expression and enhances Bax expression to desintegrate the outer mitochondrial membrane, then causes cytochrome c release which leads to the activation of effector caspase-3, and further cleaves the poly ADP-ribose polymerase (PARP) in the nucleus, finally induces cell apoptosis[1].

Aspidin BB provokes S phase arrest in HO-8910 cells with up-regulation of pRb, E2F1, CDK2, cyclin E and cyclin A proteins[1].

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

REFERENCES

[1]. Sun Y, et al. Aspidin BB, a phloroglucinol derivative, induces cell cycle arrest and apoptosis in human ovarian HO-8910 cells. Chem Biol Interact. 2013 Jul 5;204(2):88-97.

[2]. Chen NH, et al. Drychampones A-C: Three Meroterpenoids from Dryopteris championii. J Org Chem. 2016 Oct 7;81(19):9443-9448.

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