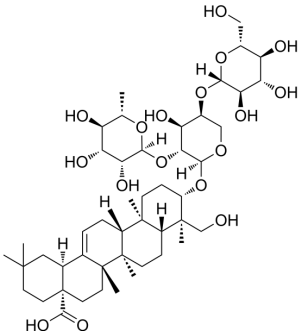
Pulsatilla saponin D

Cat. No.:	HY-N0834
CAS No.:	68027-15-6
Molecular Formula:	$C_{47}H_{76}O_{17}$
Molecular Weight:	913.1
Target:	Apoptosis
Pathway:	Apoptosis
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 39 mg/mL (42.71 mM)

* "≥" means soluble, but saturation unknown.

	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
Preparing Stock Solutions	**1 mM**	1.0952 mL	5.4759 mL	10.9517 mL
	5 mM	0.2190 mL	1.0952 mL	2.1903 mL
	10 mM	0.1095 mL	0.5476 mL	1.0952 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: ≥ 2.08 mg/mL (2.28 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (2.28 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (2.28 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Pulsatilla saponin D (SB365), isolated from the root of Pulsatilla chinensis, is an anti-tumor agent[1][2][3][4].

In Vitro

Pulsatilla saponin D (SB365) shows apoptotic effect accompanied by increased evidence of cleaved caspase-3 and poly (ADP ribose) polymerase[1].

Pulsatilla saponin D (SB365) strongly inhibits c-Met expression in gastric cancer cells[1].

Pulsatilla saponin D (SB365) strongly suppresses the growth and proliferation of 5 human pancreatic cancer cell lines (MIAPaCa-2, BXPC-3, PANC-1, AsPC-1 and HPAC) [2].

Pulsatilla saponin D (SB365) shows anti-angiogenic activity by decreasing the expression of HIF-1α and VEGF[3].

	Pulsatilla saponin D (0.3 ng/mL to 10 μg/mL) exhibits anti-tumor activity in NSCLC cancer cells[4]. MCE has not independently confirmed the accuracy of these methods. They are for reference only. Cell Cytotoxicity Assay[4]

Cell Line:	A-549, SKMEL-2, MCF-7, and Lewis lung carcinoma (LLC) cells.
Concentration:	0.3 ng/mL to 10 μg/mL.
Incubation Time:	72 h.
Result:	Exhibited an ED_{50} value of 6.3 μg/mL for A-549 cells.

In Vivo	Pulsatilla saponin D (6.4 mg/kg) exhibits anti-tumor activity in Lewis lung carcinoma model[4]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	2x2x2 mm^3 tumor fragments of a Lewis lung carcinoma (LLC) transplanted s.c. into the auxiliary region of the BDF1 mice[4].
Dosage:	6.4 mg/kg.
Administration:	Intraperitoneally on the 1 st to 7 th and 9 th to 14 th day.
Result:	Had such a potent antitumor effect (IR, 82 %) on a solid tumor, which is higher than Adriamycin (IR, 64%).

REFERENCES

[1]. Hong SW, et al. SB365, Pulsatilla saponin D, targets c-Met and exerts antiangiogenic and antitumor activities. Carcinogenesis. 2013 Sep;34(9):2156-69.

[2]. Son MK, et al. SB365, Pulsatilla saponin D suppresses proliferation and induces apoptosis of pancreatic cancer cells. Oncol Rep. 2013 Aug;30(2):801-8.

[3]. Son MK, et al. SB365, Pulsatilla saponin D suppresses the proliferation of human colon cancer cells and induces apoptosis by modulating the AKT/mTOR signalling pathway. Food Chem. 2013 Jan 1;136(1):26-33.

[4]. Yong Kim, et al. Pulsatilla saponin D: the antitumor principle from Pulsatilla koreana. Arch Pharm Res. 2004 Sep;27(9):915-8.

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