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Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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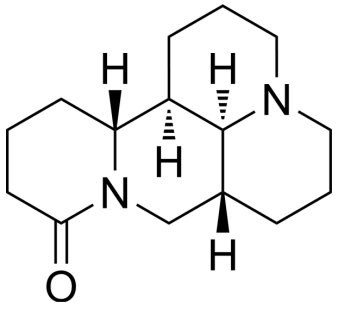
Sophoridine

Cat. No.:	HY-N1373		
CAS No.:	6882-68-4		
Molecular Formula:	$C_{15}H_{24}N_2O$		
Molecular Weight:	248.36		
Target:	Apoptosis		
Pathway:	Apoptosis		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (201.32 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	4.0264 mL	20.1321 mL	40.2641 mL
	5 mM	0.8053 mL	4.0264 mL	8.0528 mL
	10 mM	0.4026 mL	2.0132 mL	4.0264 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: ≥ 2.17 mg/mL (8.74 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.17 mg/mL (8.74 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.17 mg/mL (8.74 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Sophoridine is a quinolizidine alkaloid isolated from Leguminous plant Sophora flavescens. Sophoridine induces apoptosis. Sophoridine has the potential to be a novel, potent and selective antitumor agent candidate for pancreatic cancer with well-tolerated toxicity[1].

In Vitro

Sophoridine (0-500 μM; 48 hours) exhibits remarkable inhibition effects to the growth of human pancreatic, gastric, liver, colon, gallbladder, and prostate carcinoma cells with IC_{50} values of about 20 μM to 200 μM[1].
Sophoridine (0-20 μM; 48 hours) increases S phase cell population from 26.23% (control) to 38.67% in Miapaca-2 cells and

from 29.56% (control) to 39.16% in PANC-1 cells, about a 1.5-fold and a 1.3-fold increase, respectively[1].
Sophoridine (0-20 μM; 48 hours) significantly increases bad and bax levels, and decreases bcl-2 and bcl-xl levels in contrast, with a significant increase in Bax/Bcl-2 ratio[1].

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

Cell Viability Assay[1]

Cell Line:	Normal cells: IOSE144, HL-7702 and LO2, BEAS-2B, GES-1, HEK 293 T, HPDE, FHC, Human cancer cells: PANC-1, Mapaca-1, hepG2, SGC-7901, CBC-SD,SGC-996,PC-3,MKN-45,MGC-803,Hela and HCT116 cells
Concentration:	0, 3.9, 7.8, 15.5, 31, 62.5, 125, 250, 500 μM
Incubation Time:	48 hours
Result:	Exhibited the most potent cytotoxicity to cancer cells.

Cell Cycle Analysis[1]

Cell Line:	PANC-1 cells; Miapca-2 cells
Concentration:	20 μM
Incubation Time:	48 hours
Result:	Led to accumulated population in the S phase.

Western Blot Analysis[1]

Cell Line:	PANC-1 cells; Miapca-2 cells
Concentration:	20 μM
Incubation Time:	48 hours
Result:	Induced the activation of intrinsic apoptosis pathway.

In Vivo

Sophoridine (intraperitoneal injection; 20 or 40 mg/kg; 21 days) can inhibit the growth of xenograft pancreatic tumors[1].

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

Animal Model:	BALB/c homozygous (nu/nu) nude mice[1]
Dosage:	20 or 40 mg/kg
Administration:	Intraperitoneal injection; 20 or 40 mg/kg; 21 days
Result:	Decreased xenograft pancreatic tumors mass.

CUSTOMER VALIDATION

- Front Oncol. 2021 Feb 24;11:634851.
- J Food Nutr Res. 2021, 9(11), 591-596.
- Research Square Preprint. 2020 Jun.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Xu Z, et al. Sophoridine induces apoptosis and S phase arrest via ROS-dependent JNK and ERK activation in human pancreatic cancer cells. J Exp Clin Cancer Res. 2017 Sep 11;36(1):124.

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