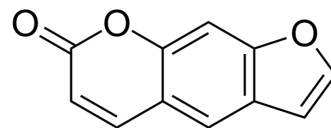


Psoralen

Cat. No.:	HY-N0053		
CAS No.:	66-97-7		
Molecular Formula:	C ₁₁ H ₆ O ₃		
Molecular Weight:	186.16		
Target:	Apoptosis; HIV; Influenza Virus		
Pathway:	Apoptosis; Anti-infection		
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 : 100 mg/mL (537.17 mM; Need ultrasonic)
 H₂O : < 0.1 mg/mL (insoluble)

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	5.3717 mL	26.8586 mL	53.7172 mL
	5 mM	1.0743 mL	5.3717 mL	10.7434 mL
	10 mM	0.5372 mL	2.6859 mL	5.3717 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 (13.43 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
 Solubility: 2.5 mg/mL (13.43 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% corn oil
 Solubility: ≥ 2.5 mg/mL (13.43 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Psoralen (Ficuin) is a coumarin isolated from the seeds of Fructus Psoraleae. Psoralen exhibits a wide range of biological properties, including anti-cancer, antioxidant, antidepressant, anticancer, antibacterial, and antiviral, et al^[1].

In Vitro

Psoralen (10-500 μM; 24-48 hours) inhibits cell viability in a concentration- and time-dependent manner in L02 and HepG2 cells. In L02 cells, Psoralen at 400 μM does not significantly change extracellular LDH levels, and 400 μM or 450 μM psoralen inhibits 50–60% of cell viability^[1].

Psoralen (150-450 μ M; 24 hours) induces significant S-phase arrest in L02 cells in time- and dose-dependent manners, but it does not exhibit significant change in the cycle distribution of HepG2 cells^[1].

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

Cell Proliferation Assay^[1]

Cell Line:	L02 and HepG2 cells
Concentration:	10 μ M, 50 μ M, 100 μ M, 200 μ M, 300 μ M, 400 μ M, 450 μ M, 500 μ M
Incubation Time:	24 or 48 hours
Result:	Inhibited the viability of L02 and HepG2 cells mainly by suppressing cell proliferation rather than causing cell death.

Cell Cycle Analysis^[1]

Cell Line:	L02 and HepG2 cells
Concentration:	150 μ M; 300 μ M; 450 μ M
Incubation Time:	24 or 48 hours
Result:	Induced cell S-phase arrest instead of causing cell apoptosis or death.

In Vivo

Psoralen (oral gavage; 17.5 mg/kg; 6 weeks) reduces the number of metastatic lesions and the rate of bone metastasis by 20% compared to vehicle-treated mice. It also reduces tumor infiltration and decreases the percentage of tumor cells in metastatic lesions by ~40% compared to vehicle in mice^[2].

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

Animal Model:	Female nude (BALB/c nu/nu) mice ^[2]
Dosage:	17.5 mg/kg
Administration:	Oral gavage; 17.5 mg/kg; 6 weeks
Result:	Inhibited metastasis of breast cancer to bone in vivo.

CUSTOMER VALIDATION

- Anal Chem. 2022 Oct 4;94(39):13623-13630.
- J Ethnopharmacol. 2022 Aug 13;115593.
- Evid Based Complement Alternat Med. 27 Aug 2022.

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REFERENCES

[1]. Wu C, et al. Psoralen inhibits bone metastasis of breast cancer in mice. *Fitoterapia*. 2013 Dec;91:205-10.

[2]. Li Yin, et al. A novel psoralen derivative-MPFC enhances melanogenesis via activation of p38 MAPK and PKA signaling pathways in B16 cells. *Int J Mol Med*. 2018 Jun;41(6):3727-3735.

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

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