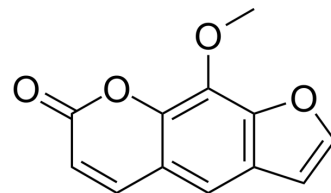


Methoxsalen

Cat. No.:	HY-30151		
CAS No.:	298-81-7		
Molecular Formula:	C ₁₂ H ₈ O ₄		
Molecular Weight:	216.19		
Target:	Cytochrome P450		
Pathway:	Metabolic Enzyme/Protease		
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 (231.28 mM; ultrasonic and warming and heat to 60°C)
 H₂O : < 0.1 mg/mL (insoluble)

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	4.6256 mL	23.1278 mL	46.2556 mL
	5 mM	0.9251 mL	4.6256 mL	9.2511 mL
	10 mM	0.4626 mL	2.3128 mL	4.6256 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 (11.56 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
 Solubility: ≥ 2.5 mg/mL (11.56 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Methoxsalen (8-Methoxypsoralen) is a furanocoumarin compound used in psoralen, used in studies of psoriasis, eczema, vitiligo and some sun-exposed cutaneous lymphomas, and is a P450 inhibitor.

In Vivo

Methoxsalen (15mg/kg, i.p, single dose) increases nicotine's C_{max} prolongs the plasma nicotine half-life (fourfold increase), decreases its clearance (sixfold decrease), and increases its AUC^[1].
 Methoxsalen (15mg/kg, i.p, single dose) enhances the potency of pharmacological effects of oral nicotine (i.e., body temperature and analgesia)^[1].
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male adult ICR mice ^[1]
Dosage:	15 mg/kg
Administration:	Intraperitoneal injection (i.p.), single dose
Result:	Increased nicotine plasma levels were still above 10ng/ml at 6hr. Induced nicotine's antinociceptive and hypothermic lasted close to 6 and 24 hr.

CUSTOMER VALIDATION

- Nat Commun. 2018 Nov 16;9(1):4820.
- Proc Natl Acad Sci U S A. 2023 Sep 12;120(37):e2308685120.
- Clin Chem. 2019 Dec;65(12):1522-1531.
- Chemosphere. 2021, 131347.
- Br J Pharmacol. 2021 Aug 6.

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REFERENCES

[1]. Alsharari SD, et al. Pharmacokinetic and Pharmacodynamics Studies of Nicotine After Oral Administration in Mice: Effects of Methoxsalen, a CYP2A5/6 Inhibitor. Nicotine Tob Res. 2014 Jan;16(1):18-25.

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

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