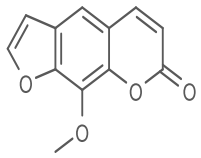
Data Sheet (Cat.No.T1548)

TargetMol
A DRUG SCREENING EXPERT

8-Methoxypsoralen

Chemical Properties



CAS No.:	298-81-7
Formula:	C12H8O4
Molecular Weight:	216.19
Appearance:	Solid
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	Methoxsalen is a Photoactivated Radical Generator and Psoralen. The mechanism of action of methoxsalen is as a Photoabsorption. The physiologic effect of methoxsalen is by means of Photosensitizing Activity.
Targets(IC_{50})	DNA: None
In vitro	Methoxsalen inhibits CYP2A6 (Ki = 0.8 μM) with about 3.5- 94-fold greater potency than other P450s, except for CYP1A2 (Ki = 0.2 μM). Methoxsalen shows noncompetitive inhibition of nicotine metabolism, with an apparent Ki value of 0.1 μM in cDNA-expressing microsomes. [1] Methoxsalen is metabolized in human liver microsomes at the rate of 50-100 pmol/mg protein/min (approx. 30% of the activity in mouse liver microsomes). Methoxsalen is a very potent inhibitor of human cytochrome P450 2A6 (CYP2A6) and mouse Cyp2a-5-mediated coumarin 7-hydroxylation in vitro. [2]
In vivo	Methoxsalen results in a significant decrease in the following factors: number and diameter of corpus lutei, Graafian follicles, diameter of granulosa cell layer and oocytes, number of primordial and primary and growing follicles, while the number of atretic follicle is increased. Methoxsalen also significantly reduces circulating estrogen levels in blood serum of oogenesis Balb/C mice. [3] Methoxsalen dose-dependently stimulates a sustained increase in short-circuit current in the mouse jejunum. Methoxsalen increases the open probability of the basolateral IK(Ca) channel of isolated crypts in the mouse jejunum. [4] Methoxsalen effectively reverses trimethyltin (TMT)-induced memory impairment on both Y-maze and passive avoidance tests in mice. Methoxsalen inhibits brain AchE activity. Methoxsalen significantly ameliorates the level of oxidative stress. [5]

Solubility Information

Solubility	DMSO: 40 mg/mL (185 mM) Ethanol: 5 mg/mL (23.12 mM) Water: <1 mg/mL (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.626 mL	23.128 mL	46.256 mL
5 mM	0.925 mL	4.626 mL	9.251 mL
10 mM	0.463 mL	2.313 mL	4.626 mL
50 mM	0.093 mL	0.463 mL	0.925 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. Zhang W, et al. Drug Metab Dispos,2001, 29(6), 897-902.
2. Mäenpää J, et al. Biochem Pharmacol. 1994 Oct 7;48(7):1363-9.
3. Farhadi M, et al. Cell J,2014, 15(4), 348-355.
4. Hamilton KL, et al. Exp Physiol,2002, 87(4), 437-445.
5. Kim JK, et al. Biosci Biotechnol Biochem,2011, 75(10), 1984-1989.

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