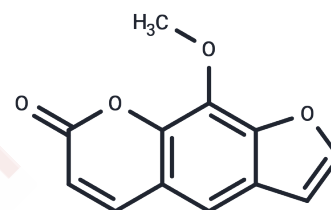


Methoxsalen

Chemical Properties

| | |
|-------------------|---|
| CAS No. : | 298-81-7 |
| Formula: | C ₁₂ H ₈ O ₄ |
| Molecular Weight: | 216.19 |
| Storage: | Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA. |



Biological Description

| | |
|---------------|--|
| Description | Methoxsalen (NCI-C55903) 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(IC50) | Cytochromes P450,DNA |
| In vitro | Methoxsalen inhibits CYP2A6 (K _i = 0.8 μM) with about 3.5- 94-fold greater potency than other P450s, except for CYP1A2 (K _i = 0.2 μM). Methoxsalen shows noncompetitive inhibition of nicotine metabolism, with an apparent K _i 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 | H ₂ O: < 1 mg/mL (insoluble or slightly soluble), Ethanol: 5 mg/mL (23.13 mM),Sonication is recommended. DMSO: 51 mg/mL (235.9 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble) |
| In vivo Formulation | 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (9.25 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and</i> |

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| | |
|---------------------|---|
| In vivo Formulation | <i>used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i> |
|---------------------|---|

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|-------|-----------|------------|------------|
| 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 |
| 50 mM | 0.0925 mL | 0.4626 mL | 0.9251 mL |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

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