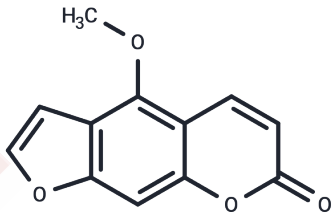
Data Sheet (Cat.No.T2143)

TargetMol

Bergapten

Chemical Properties



CAS No. : 484-20-8

Formula: C12H8O4

Molecular Weight: 216.19

Storage: Keep away from direct sunlight
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	Bergapten (5-Methoxypsoralen), a psoralen, inhibits cell replication.
Targets(IC50)	Autophagy,Cytochromes P450
In vitro	In C57BL/6J mice induced with acetaminophen (APAP), Bergapten exhibits antioxidant activity and mitigates hepatotoxicity.
In vivo	In both tamoxifen-sensitive and -resistant breast cancer cells, Bergapten eliminates ERα and reprograms membrane signaling targeted at ERα, thereby enhancing the potential for cell mitosis.
Cell Research	5-Methoxypsoralen (5-MOP) is dissolved in DMSO and stored, and then diluted with appropriate medium (final DMSO <0.1%) before use[1]. The human colon adenocarcinoma cell line (COLO 205, from a 70-year-old male Caucasian) sre placed into 75-cm2 tissue culture flasks and grown in RPMI1640 medium, supplemented with 10% fetal bovine serum, containing penicillin and streptomycin (100 Ig/mL) and 1 mM glutamine, at 37°C in a humidified atmosphere of 5% CO2 and 95% O2. The human stomach adenocarcinoma cell line are placed into 75-cm2 tissue culture flasks and grown in RPMI 1640 medium, supplemented with 10% fetal bovine serum, containing penicillin and streptomycin (100 Ig/mL) and 1 mM glutamine, at 37°C in a humidified atmosphere of 5% CO2 and 95% O2. SC-M1 and COLO 205 cells are treated with different concentrations of 5-MOP (0.05, 0.5, 5, 10, 25 and 50 mM) and incubated for 72 h for the dose-effect study of 5-MOP on NAT activity. To determine the time-course effect of 0.5 mM 5-MOP on NAT activity, the cells are incubated at 37AC and harvested at 12, 24, 48 and 72 h, respectively. 5-MOP is dissolved in DMSO and the final concentration of vehicle is <0.1%. Only DMSO (solvent) is added for the control regimen[1].

Solubility Information

Solubility	Ethanol: < 1 mg/mL (insoluble or slightly soluble), H2O: < 1 mg/mL (insoluble or slightly soluble), DMSO: 13.82 mg/mL (63.93 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

In vivo Formulation	10% DMSO+90% Corn Oil: 1 mg/mL (4.63 mM),Sonication is recommended. *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 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.*

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

Panno ML, et al. Breast Cancer Res Treat, 2012, 136(2), 443-455.
Gao S, Zou X, Wang Z, et al. Bergapten attenuates microglia-mediated neuroinflammation and ischemic brain injury by targeting Kv1. 3 and Carbonyl reductase 1. European Journal of Pharmacology. 2022: 175242.
Liu WX, et al. World J Gastroenterol, 2012, 18(18), 2197-2202.