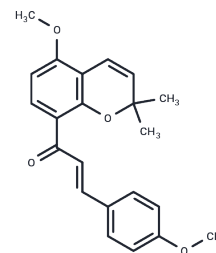


Millepachine

Chemical Properties

CAS No. :	1393922-01-4
Formula:	C ₂₂ H ₂₂ O ₄
Molecular Weight:	350.41
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	Millepachine is a natural product found in the Chinese herbal medicine with strong antitumor effects against numerous human cancer cells.
Targets(IC50)	Apoptosis
In vitro	Millepachine (2-8 μ M; 24 h) inhibits ATP-binding cassette transporter activity in A2780CP cells. Millepachine (2-8 μ M; 24 or 48 h) induces significant G2/M arrest and apoptosis of cisplatin-sensitive A2780S and cisplatin-resistant A2780CP cells. The percentage of cells in the G2/M fraction increased from 15.99% in vehicle cells to 24.93%, 60.67%, and 77.31% at dose of 2, 4, and 8 μ M in A2780S cells, respectively. Millepachine (2-8 μ M; 24 h) decreases topoisomerase II levels in A2780S and A2780CP cells. Millepachine (1.25-20 μ M; 48 h) remarkably inhibits the proliferation of cisplatin-resistant A2780CP cells with an IC50 of 4 μ M[1].
In vivo	Millepachine (20 mg/kg; i.v.) reduced tumor volume and weight with inhibitory rates of 73.21% and 65.58% in A2780S and A2780CP xenograft models, respectively, and does not induce acquired drug resistance in an excised A2780S xenograft model[1].

Solubility Information

Solubility	DMSO: 100 mg/mL (285.38 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 3.3 mg/mL (9.42 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 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	2.8538 mL	14.269 mL	28.538 mL
5 mM	0.5708 mL	2.8538 mL	5.7076 mL
10 mM	0.2854 mL	1.4269 mL	2.8538 mL
50 mM	0.0571 mL	0.2854 mL	0.5708 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

Wu W, et, al. Millepachine showed novel antitumor effects in cisplatin-resistant human ovarian cancer through inhibiting drug efflux function of ATP-binding cassette transporters. *Phytother Res.* 2018 Dec; 32(12):2428-2435.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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