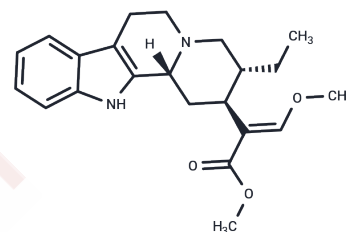


Hirsutine

Chemical Properties

CAS No. :	7729-23-9
Formula:	C22H28N2O3
Molecular Weight:	368.47
Storage:	Keep away from direct sunlight, Keep away from moisture Powder: -20°C for 3 years In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



Biological Description

Description	Hirsutine induces apoptosis and is a potent Dengue virus inhibitor exhibiting low cytotoxicity. Hirsutine has anticancer, cardioprotective, anti-hypertensive and anti-arrhythmic activities, it also has vasodilatation activity, the mechanism is related to blockade of Ca ²⁺ influx through L-type Ca ²⁺ channels and inhibition of intracellular Ca ²⁺ release may have no relationship with K ⁺ channels.
Targets(IC50)	Apoptosis, Anti-infection
In vitro	The clinical utility of Hirsutine against human breast cancer. Among six distinct human breast cancer cell lines, Hirsutine showed strong cytotoxicity against HER2-positive/p53-mutated MDA-MB-453 and BT474 cell lines. Conversely, HER2-negative/p53 wild-type MCF-7 and ZR-75-1 cell lines showed resistance against Hirsutine-induced cytotoxicity. Hirsutine induced apoptotic cell death in the MDA-MB-453 cells, but not in the MCF-7 cells, through activation of caspases. Furthermore, Hirsutine induced the DNA damage response in the MDA-MB-453 cells, but not in the MCF-7 cells, as highlighted by the upregulation of γH2AX expression. Along with the induction of the DNA damage response, the suppression of HER2, NF-κB and Akt pathways and the activation of the p38 MAPK pathway in the MDA-MB-453 cells were observed[1]

Solubility Information

Solubility	DMSO: 77.5 mg/mL (210.33 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: 7.75 mg/mL (21.03 mM), Solution. 10% DMSO+90% Saline: < 7.75 mg/mL (21.03 mM), Lower concentrations may be soluble, but exact solubility limit is unknown. <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	2.7139 mL	13.5696 mL	27.1393 mL
5 mM	0.5428 mL	2.7139 mL	5.4279 mL
10 mM	0.2714 mL	1.357 mL	2.7139 mL
50 mM	0.0543 mL	0.2714 mL	0.5428 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

Selective anticancer activity of hirsutine against HER2-positive breast cancer cells by inducing DNA damage. *Oncol Rep.* 2015 Apr;33(4):2072-6.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

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