

Fumitremorgin C

Chemical Properties

CAS No. : 118974-02-0

Formula: C₂₂H₂₅N₃O₃

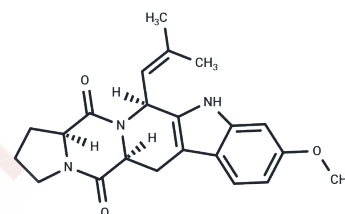
Molecular Weight: 379.45

Storage:

Store at low temperature, 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	Fumitremorgin C (12 α -Fumitremorgin C) is a mycotoxin and inhibits ABCG2/BCRP.
Targets(IC50)	BCRP, Antibacterial, Antibiotic, ABC Transporter
In vitro	Multidrug resistance (MDR) presents a significant challenge in cancer chemotherapy, but Fumitremorgin C has shown remarkable efficacy in counteracting this problem by increasing drug accumulation in multidrug-selected cell lines. Specifically, it enhances the effectiveness of doxorubicin, mitoxantrone, and topotecan by reversing mitoxantrone resistance up to 114-fold and doxorubicin resistance 3-fold in MCF-7/mtxR cells. Additionally, in S1M1-3.2 cells, Fumitremorgin C substantially boosts the toxicity of these drugs, demonstrating a 26-fold increase for doxorubicin, 93-fold for mitoxantrone, and 24-fold for topotecan. However, it does not mitigate drug resistance in cells with high levels of Pgp or MRP expression [1]. Notably, Fumitremorgin C virtually eliminates resistance mediated by BCRP in vitro, making it a valuable pharmacological tool for investigating the expression and molecular functionality of this transporter. Furthermore, it significantly raises the toxicity of mitoxantrone and topotecan in vector-transfected MCF-7 cells by 2.5-5.6 fold and reduces the IC ₅₀ of topotecan in BCRP-overexpressing cells to levels even lower than those in untreated vector-transfected cells [2].

Solubility Information

Solubility	DMSO: 50 mg/mL (131.77 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 (8.7 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	2.6354 mL	13.177 mL	26.3539 mL
5 mM	0.5271 mL	2.6354 mL	5.2708 mL
10 mM	0.2635 mL	1.3177 mL	2.6354 mL
50 mM	0.0527 mL	0.2635 mL	0.5271 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

Rabindran SK, et al. Reversal of a novel multidrug resistance mechanism in human colon carcinoma cells by fumitremorgin C. *Cancer Res.* 1998 Dec 15;58(24):5850-8.

Rabindran SK, et al. Fumitremorgin C reverses multidrug resistance in cells transfected with the breast cancer resistance protein. *Cancer Res.* 2000 Jan 1;60(1):47-50.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481