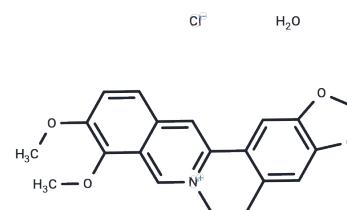


Berberine chloride hydrate

Chemical Properties

CAS No. :	68030-18-2
Formula:	C ₂₀ H ₂₀ ClNO ₅
Molecular Weight:	389.83
Appearance:	no data available
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	Berberine chloride hydrate (Natural Yellow 18 chloride hydrate) is an alkaloid commonly used as an antibiotic. Berberine chloride hydrate has antitumor activity, induces the generation of reactive oxygen species (ROS), and inhibits DNA topoisomerase.
Targets(IC50)	Reactive Oxygen Species, Topoisomerase, Endogenous Metabolite, Antibacterial, Antibiotic, Parasite, Autophagy
In vitro	Berberine chloride hydrate (1.25-160 µM; 72 hours) has potential inhibitory effects on the proliferation of four colorectal carcinoma cell lines LoVo, HCT116, SW480, and HT-29. Berberine chloride hydrate (10-80 µM) suppresses cyclin B1, cdc2 and cdc25c protein expression after 24 h, especially at the dose of 80.0 µM. Berberine chloride hydrate (1.25-160 µM; 24-72 hours) induces a time- and dose-dependent inhibition of LoVo cell growth. LoVo cells are exposure to Berberine chloride hydrate (10-80 µM) for 24 h. Cell cycle analysis of 40 µM Berberine-treated LoVo cells by flow cytometry shows accumulation of cells in the G2/M phase[1].
In vivo	Berberine chloride hydrate at doses of 30 and 50 mg/kg/day taken by gastrointestinal gavage shows inhibitory rates of 33.1% and 45.3% on the human colorectal adenocarcinoma xenograft growth in nude mice[1]. Berberine chloride hydrate (Natural Yellow 18 chloride hydrate; 10, 30, or 50 mg/kg/day; gastrointestinal gavage; for 10 consecutive days) inhibits the growth of human colorectal adenocarcinoma in vivo.

Solubility Information

Solubility	DMSO: 1 mg/mL (2.57 mM), H ₂ O: 1.25 mg/mL (3.21 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5652 mL	12.8261 mL	25.6522 mL
5 mM	0.513 mL	2.5652 mL	5.1304 mL
10 mM	0.2565 mL	1.2826 mL	2.5652 mL
50 mM	0.0513 mL	0.2565 mL	0.513 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.

Reference

Cai Y, et al. Berberine inhibits the growth of human colorectal adenocarcinoma in vitro and in vivo. J Nat Med. 2014 Jan;68(1):53-62.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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