Product Data Sheet

Product Name: Berberine Sulfate
Cat. No.: GN10523

Chemical Properties

Cas. No.	633-66-9		
SMILES	COC1=C(C2=C[N+]3=C(C=C2C=C1)C4=CC5=C(C=C4CC3)OCO5)OC.OS(=O)(=O)[O-]		
Formula	$C_{20}H_{19}NO_8S$	M.Wt	433.43
Solubility	≥ 21.65mg/mL in DMSO	Storage	-20°C, sealed storage, away from moisture
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	Berberine Sulfate		

Background

Berberine sulfate is an alkaloid isolated from the Chinese herbal medicine Huanglian, as an antibiotic. Berberine sulfate induces reactive oxygen species (ROS) generation and inhibits DNA topoisomerase. Berberine sulfate has antineoplastic properties[1].

Berberine sulfate (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[1]. Berberine sulfate (1.25-160 μM; 24-72 hours) induces a time- and dose-dependent inhibition of LoVo cell growth[1]. LoVo cells are exposure to Berberine sulfate (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].Berberine sulfate (10-80 μM) suppresses cyclin B1, cdc2 and cdc25c protein expression after 24 h, especially at the dose of 80.0 μM[1].

Berberine sulfate (10, 30, or 50 mg/kg/day; gastrointestinal gavage; for 10 consecutive days) inhibits the growth of human colorectal adenocarcinoma in vivo. Berberine at doses of 30 and 50 mg/kg/day taken by gastrointestinal gavage shows inhibitory rates of

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33.1% and 45.3% on the human colorectal adenocarcinoma xenograft growth in nude mice[1].

References:
[1]. 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.

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