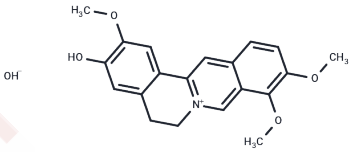
Data Sheet (Cat.No.T75436)

TargetMol

Jatrorrhizine hydroxide

Chemical Properties



CAS No. : 483-43-2

Formula: C20H21NO5

Molecular Weight: 355.38

Storage: 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	Jatrorrhizine hydroxide is an alkaloid extracted from Coptis chinensis with neuroprotective, antimicrobial, antiplasmodial, and antioxidant activities. Jatrorrhizine hydroxide is a potent and orally active acetylcholinesterase inhibitor (IC_{50} = 872 nM) with over 115-fold selectivity over BuChE. Jatrorrhizine hydroxide reduces serotonin and norepinephrine uptake by blocking dopamine uptake-2 transporters.
Targets(IC50)	5-HT Receptor,Antibacterial,Cholinesterase (ChE)
In vitro	Jatrorrhizine hydroxide exhibits antimalarial and antiamebic activities, demonstrating inhibitory effects against both Plasmodium falciparum and E. histolytica, with IC50 values of 3.15 μM and 82.7 μM, respectively [1]. At concentrations of 25 μM and 50 μM, Jatrorrhizine hydroxide significantly inhibits the uptake of serotonin and norepinephrine in synaptosomes [3].
In vivo	Jatrorrhizine hydroxide (5, 10, and 20 mg/kg, intraperitoneal injection) significantly reduced the immobility time of mice in the tail suspension test (TST) [2].

Solubility Information

Solubility	H2O: 2 mg/mL (5.63 mM),Sonication is recommeded. DMSO: 2.5 mg/mL (7.03 mM),Sonication is recommeded. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8139 mL	14.0694 mL	28.1389 mL
5 mM	0.5628 mL	2.8139 mL	5.6278 mL
10 mM	0.2814 mL	1.4069 mL	2.8139 mL
50 mM	0.0563 mL	0.2814 mL	0.5628 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

Sun S, et al. Jatrorrhizine reduces 5-HT and NE uptake via inhibition of uptake-2 transporters and produces antidepressant-like action in mice. Xenobiotica. 2019 Oct;49(10):1237-1243.
Xiaofei Jiang, et al. Synthesis and Biological Evaluation of Novel Jatrorrhizine Derivatives with Amino Groups Linked at the 3-Position as Inhibitors of Acetylcholinesterase. Research Article Volume 2017
C W Wright, et al. In vitro antiplasmodial, antiamoebic, and cytotoxic activities of some monomeric isoquinoline alkaloids. J Nat Prod. 2000 Dec;63(12):1638-40.