Corydaline

Cat. No.: HY-N0923

CAS No.: 518-69-4

Molecular Formula: $C_{22}H_{27}NO_4$

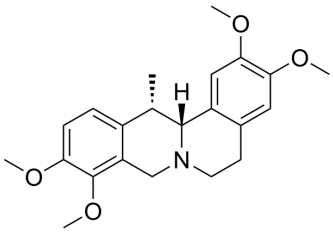
Molecular Weight: 369.45

Target: Cholinesterase (ChE); Enterovirus; Opioid Receptor

Pathway: Neuronal Signaling; Anti-infection; GPCR/G Protein

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 33.33 mg/mL (90.22 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.7067 mL	13.5336 mL	27.0673 mL
	5 mM	0.5413 mL	2.7067 mL	5.4135 mL
	10 mM	0.2707 mL	1.3534 mL	2.7067 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (6.77 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Corydaline ((+)-Corydaline), an isoquinoline alkaloid isolated from Corydalis yanhusuo, is an AChE inhibitor with an IC_{50} of 226 μM. Corydaline is a μ-opioid receptor (K_i of 1.23 μM) agonist and inhibits enterovirus 71 (EV71) replication (IC_{50} of 25.23 μM). Corydaline has anti-angiogenic, anti-allergic and gastric-emptying and antinociceptive activities[1][2][3].

IC_{50} & Target		
	AChE	μ Opioid Receptor/MOR

In Vitro

Corydaline (12.5-50 μM; 24 hours) treatment inhibits EV71 replication by suppressing the COX-2 expression and the phosphorylation of JNK MAPK and P38 MAPK but not ERK MAPK in vitro[2].

?Corydaline could inhibit the viral RNA synthesis in a dose dependent manner[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[2]

Cell Line:	Vero cells infected with EV71
Concentration:	12.5 μM, 25 μM, 50 μM
Incubation Time:	24 hours
Result:	Reduced the phosphorylation of P38 MAPK and JNK MAPK and the expression of COX-2.

In Vivo

Corydaline (10 mg/kg; subcutaneous administration; once) treatment shows antinociceptive effects in mice by significantly inhibiting the writhing behavior[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male CD1 mice (30-35 g, 7-8 weeks old) injected with acetic acid[3]
Dosage:	10 mg/kg
Administration:	Subcutaneous administration; once
Result:	Showed antinociceptive effects in mice.

REFERENCES

[1]. Hai-Tao Xiao, et al. Acetylcholinesterase inhibitors from Corydalis yanhusuo. Nat Prod Res. 2011 Sep;25(15):1418-22.

[2]. Hui-Qiang Wang, et al. Corydaline inhibits enterovirus 71 replication by regulating COX-2 expression. J Asian Nat Prod Res. 2017 Nov;19(11):1124-1133.

[3]. Teresa Kaserer, et al. Identification and characterization of plant-derived alkaloids, corydine and corydaline, as novel mu opioid receptor agonists. Sci Rep. 2020 Aug 14;10(1):13804.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA