Isocorydine

Cat. No.: HY-N2591

CAS No.: 475-67-2

Molecular Formula: $C_{20}H_{23}NO_4$

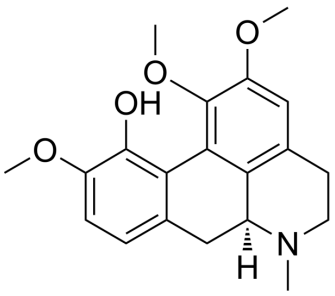
Molecular Weight: 341.4

Target: Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease

Storage: 4°C, protect from light

* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 20 mg/mL (58.58 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.9291 mL	14.6456 mL	29.2912 mL
	5 mM	0.5858 mL	2.9291 mL	5.8582 mL
	10 mM	0.2929 mL	1.4646 mL	2.9291 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 (7.32 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (7.32 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2 mg/mL (5.86 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Isocorydine is isolated from Dicranostigma leptopodum (Maxim.) Fedde (DLF). Isocorydine combines with Doxorubicin (DOX) has a promising potential to eradicate hepatocellular carcinoma (HCC)[1].

IC_{50} & Target

Human Endogenous Metabolite

In Vitro

Isocorydine (0-400 ug/ml; 48 hours) show a significant decrease in the IC50 for ICD and DOX, the CI values are 0.605, 0.644, 0.804, and 0.707 respectively for Huh-7, Hep-G2, SNU-449 and SNU-387[1].
Isocorydine (0-400 ug/ml; 48 hours) abrogates DOX-induced upregulation of mesenchymal markers and the downregulation of epithelial markers in human HCC cell lines[1].

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

Cell Viability Assay[1]

Cell Line:	Huh-7, Hep-G2 , SNU-387, SNU-449 cells
Concentration:	0-400 ug/ml
Incubation Time:	24 hours
Result:	Had a higher cytotoxicity in HCC cells in comparison to ICD or DOX alone.

Western Blot Analysis[1]

Cell Line:	Huh-7, Hep-G2 , SNU-387, SNU-449 cells
Concentration:	
Incubation Time:	24 hours
Result:	Downregulated protein levels of Claundin-1 and E-cadherin.

In Vivo

Isocorydine (intraperitoneal injection; 0.4 mg/kg; every 2 days for 2 weeks) retards the tumor growth, but the combined treatment of Doxorubicin (DOX) or ICD significantly inhibits tumor growth[1].

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

Animal Model:	Female nude mice[1]
Dosage:	0.4 mg/ml
Administration:	Injected intraperitoneally every 2 days for 2 weeks
Result:	Combined treatment of isocorydine and DOX showed a promising potential to eradicate HCC.

REFERENCES

[1]. Pan JX, et al. Isocorydine suppresses doxorubicin-induced epithelial-mesenchymal transition via inhibition of ERK signaling pathways in hepatocellular carcinoma. Am J Cancer Res. 2018 Jan 1;8(1):154-164. eCollection 2018.

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