Dehydrocorydaline (hydroxyl)

Cat. No.: HY-N0674B

Molecular Formula: $C_{22}H_{25}NO_5$

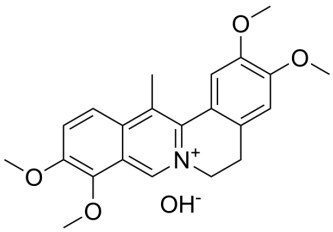
Molecular Weight: 383.44

Target: Bcl-2 Family; Caspase; PARP; p38 MAPK; Parasite; Autophagy

Pathway: Apoptosis; Cell Cycle/DNA Damage; Epigenetics; MAPK/ERK Pathway; Anti-infection; Autophagy

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 12.5 mg/mL (32.60 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.6080 mL	13.0399 mL	26.0797 mL
	5 mM	0.5216 mL	2.6080 mL	5.2159 mL
	10 mM	0.2608 mL	1.3040 mL	2.6080 mL

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

BIOLOGICAL ACTIVITY

Description

Dehydrocorydaline (13-Methylpalmatine) hydroxyl is an alkaloid that regulates protein expression of Bax, Bcl-2; activates caspase-7, caspase-8, and inactivates PARP. Dehydrocorydaline hydroxyl elevates p38 MAPK activation. Anti-inflammatory and anti-cancer activities. Dehydrocorydaline hydroxyl shows strong anti-malarial effects (IC50=38 nM), and low cytotoxicity (cell viability > 90%) using P. falciparum 3D7 strain.

In Vitro

Dehydrocorydaline hydroxyl (0-200 μM) treatment significantly inhibits the growth of MCF-7 cells in a dose-dependent manner. The cell viability is decreased by approximate 40% after 24 h of 200 μM Dehydrocorydaline hydroxyl[1].

Dehydrocorydaline hydroxyl (0-200 μM)dose-dependently increases Bax protein expression and decreases Bcl-2 protein expression[1].

Dehydrocorydaline hydroxyl (0-200 μM)induces activation of caspase-7,-8 and the cleavage of PARP without affecting caspase-9[1].

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

In Vivo

Dehydrocorydaline hydroxyl manifests a low acute toxicity with an LD_{50} of about 277.5±19.0 mg/kg body weight in mice following oral administration and 21.1±1.4 mg/kg for intraperitoneal injection[4].

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

CUSTOMER VALIDATION

- Phytomedicine. 8 September 2021, 153740.
- J Agric Food Chem. 2023 Oct 12.
- Front Pharmacol. 31 May 2021.
- J Cell Physiol. 2019 Dec;234(12):22463-22476.
- Aging (Albany NY). 2021 Oct 7;13(19):23133-23148.

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REFERENCES

[1]. Xu Z, et al. Dehydrocorydaline inhibits breast cancer cells proliferation by inducing apoptosis in MCF-7 cells. Am J Chin Med. 2012;40(1):177-85.

[2]. Yoo M, et al. Dehydrocorydaline promotes myogenic differentiation via p38 MAPK activation. Mol Med Rep. 2016 Oct;14(4):3029-36.

[3]. Nonaka M, et al. Screening of a library of traditional Chinese medicines to identify anti-malarial compounds and extracts. Malar J. 2018 Jun 25;17(1):244.

[4]. Yin ZY, et al. Antinociceptive effects of dehydrocorydaline in mouse models of inflammatory pain involve the opioid receptor and inflammatory cytokines. Sci Rep. 2016 Jun 7;6:27129.

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