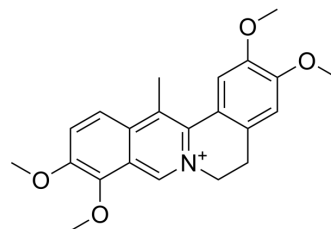


## Dehydrocorydaline

<b>Cat. No.:</b>	HY-N0674												
<b>CAS No.:</b>	30045-16-0												
<b>Molecular Formula:</b>	C <sub>22</sub> H <sub>24</sub> NO <sub>4</sub> <sup>+</sup>												
<b>Molecular Weight:</b>	366.43												
<b>Target:</b>	Bcl-2 Family; Caspase; PARP; p38 MAPK; Autophagy; Parasite												
<b>Pathway:</b>	Apoptosis; Cell Cycle/DNA Damage; Epigenetics; MAPK/ERK Pathway; Autophagy; Anti-infection												
<b>Storage:</b>	<table border="0"> <tr> <td>Powder</td> <td>-20°C</td> <td>3 years</td> </tr> <tr> <td></td> <td>4°C</td> <td>2 years</td> </tr> <tr> <td>In solvent</td> <td>-80°C</td> <td>6 months</td> </tr> <tr> <td></td> <td>-20°C</td> <td>1 month</td> </tr> </table>	Powder	-20°C	3 years		4°C	2 years	In solvent	-80°C	6 months		-20°C	1 month
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	4°C	2 years											
In solvent	-80°C	6 months											
	-20°C	1 month											



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 25 mg/mL (68.23 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	1 mM	2.7290 mL	13.6452 mL	27.2903 mL
		5 mM	0.5458 mL	2.7290 mL	5.4581 mL
		10 mM	0.2729 mL	1.3645 mL	2.7290 mL
Please refer to the solubility information to select the appropriate solvent.					
<b>In Vivo</b>	<ol style="list-style-type: none"> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline Solubility: ≥ 6.25 mg/mL (17.06 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: ≥ 6.25 mg/mL (17.06 mM); Clear solution</li> </ol>				

### BIOLOGICAL ACTIVITY

<b>Description</b>	Dehydrocorydaline (13-Methylpalmatine) is an alkaloid that regulates protein expression of Bax, Bcl-2; activates caspase-7, caspase-8, and inactivates PARP <sup>[1]</sup> . Dehydrocorydaline elevates p38 MAPK activation. Anti-inflammatory and anti-cancer activities <sup>[2]</sup> . Dehydrocorydaline shows strong anti-malarial effects (IC <sub>50</sub> =38 nM), and low cytotoxicity (cell viability > 90%) using <i>P. falciparum</i> 3D7 strain <sup>[3]</sup> .			
<b>IC<sub>50</sub> &amp; Target</b>	Plasmodium	Bcl-2	Bax	Caspase-7
	Caspase-8	PARP		

<b>In Vitro</b>	<p>Dehydrocorydaline (0-200 <math>\mu</math>M) 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 <math>\mu</math>M Dehydrocorydaline<sup>[1]</sup>.</p> <p>Dehydrocorydaline (0-200 <math>\mu</math>M) dose-dependently increases Bax protein expression and decreases Bcl-2 protein expression<sup>[1]</sup>.</p> <p>Dehydrocorydaline (0-200 <math>\mu</math>M) induces activation of caspase-7,-8 and the cleavage of PARP without affecting caspase-9<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>
<b>In Vivo</b>	<p>Dehydrocorydaline manifests a low acute toxicity with an LD<sub>50</sub> of about 277.5<math>\pm</math>19.0 mg/kg body weight in mice following oral administration and 21.1<math>\pm</math>1.4 mg/kg for intraperitoneal injection<sup>[4]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

## CUSTOMER VALIDATION

- New Phytol. 2024 May 13.
- Int J Biol Macromol. 2024 May;266(Pt 1):130939.
- Int J Biol Macromol. 2024 Mar 15:130939.
- Phytomedicine. 8 September 2021, 153740.
- J Agric Food Chem. 2023 Oct 12.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

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

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

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