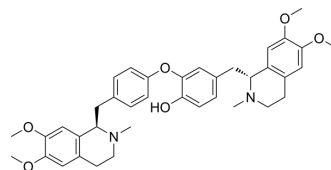


## Dauricine

<b>Cat. No.:</b>	HY-N0220
<b>CAS No.:</b>	524-17-4
<b>Molecular Formula:</b>	C <sub>38</sub> H <sub>44</sub> N <sub>2</sub> O <sub>6</sub>
<b>Molecular Weight:</b>	624.77
<b>Target:</b>	NF-κB; Apoptosis; Oxidative Phosphorylation
<b>Pathway:</b>	NF-κB; Apoptosis; Metabolic Enzyme/Protease
<b>Storage:</b>	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 100 mg/mL (160.06 mM; Need ultrasonic)																							
	<table border="1"> <thead> <tr> <th rowspan="2">Preparing Stock Solutions</th> <th rowspan="2">Solvent Concentration</th> <th colspan="3">Mass</th> </tr> <tr> <th>1 mg</th> <th>5 mg</th> <th>10 mg</th> </tr> </thead> <tbody> <tr> <td></td> <td>1 mM</td> <td>1.6006 mL</td> <td>8.0029 mL</td> <td>16.0059 mL</td> </tr> <tr> <td></td> <td>5 mM</td> <td>0.3201 mL</td> <td>1.6006 mL</td> <td>3.2012 mL</td> </tr> <tr> <td></td> <td>10 mM</td> <td>0.1601 mL</td> <td>0.8003 mL</td> <td>1.6006 mL</td> </tr> </tbody> </table>	Preparing Stock Solutions	Solvent Concentration	Mass			1 mg	5 mg	10 mg		1 mM	1.6006 mL	8.0029 mL	16.0059 mL		5 mM	0.3201 mL	1.6006 mL	3.2012 mL		10 mM	0.1601 mL	0.8003 mL	1.6006 mL
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	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: ≥ 2.5 mg/mL (4.00 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (4.00 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil Solubility: ≥ 2.5 mg/mL (4.00 mM); Clear solution</li> </ol>																							

### BIOLOGICAL ACTIVITY

<b>Description</b>	Dauricine, a bisbenzylisoquinoline alkaloid in <i>Menispermum dauricum</i> , possesses anti-inflammatory activity. Dauricine inhibits cell proliferation and invasion, and induces apoptosis by suppressing NF-κB activation in a dose- and time-dependent manner in colon cancer <sup>[1]</sup> .
<b>In Vitro</b>	<p>Dauricine (0-20 μM, 8 days) inhibits cell growth of HCT116, HCT8, SW620, and SW480 cells<sup>[1]</sup>.</p> <p>Dauricine (0-20 μM, 12 and 24 h) causes G1 phase cell-cycle arrest in HCT116 cells<sup>[1]</sup>.</p> <p>Dauricine (0-20 μM, 36 h) induces cell apoptosis and inhibits cell invasion in HCT116 cells<sup>[1]</sup>.</p> <p>Dauricine (0-20 μM, 6 h) inhibits the activation of NF-κB signaling pathway in HCT116 cells<sup>[1]</sup>.</p> <p>Dauricine (1 and 2 μg/mL, 24 h) inhibits glucose glycolysis and increased oxidative phosphorylation in HepG2 and Huh-7</p>

cells<sup>[3]</sup>.

Dauricine (2 µg/mL, 48 h) increases the sensitivities of HCC cell lines to both Cisplatin (HY-17394) and Sorafenib (HY-10201)<sup>[3]</sup>.

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

#### Apoptosis Analysis<sup>[1]</sup>

Cell Line:	HCT 116
Concentration:	5, 10, 20 µM
Incubation Time:	36 h
Result:	Showed the percentages of apoptotic rate of 7.8% to 14.4%, 19.8%, and 29.7% at 5, 10, and 20 µM. Increased the accumulation of cleavage PARP and caspase3.

#### Western Blot Analysis<sup>[1]</sup>

Cell Line:	HCT 116
Concentration:	5, 10, 20 µM
Incubation Time:	36 h
Result:	Inhibited the TNF (0.5 nM)-induced phosphorylation and nuclear translocation of p65.

#### In Vivo

Dauricine (s.c., 40 mg/kg, every 2-day, for 9 days) inhibits colonic tumor growth in a HCT116 xenograft mouse model<sup>[1]</sup>.

Dauricine (1 or 10 mg/kg, i.p.) ameliorates cognitive impairment, reduces Aβ Accumulation and Tau hyperphosphorylation in 3xTg-Alzheimer's Disease mice<sup>[2]</sup>.

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

Animal Model:	HCT116 xenograft mouse model <sup>[1]</sup>
Dosage:	40 mg/kg
Administration:	s.c., every 2-day, for 9 days
Result:	Inhibited colonic tumor growth completely at 9 days, with little effect on body weight.

## CUSTOMER VALIDATION

- Biochem Pharmacol. 2023 Sep 29;217:115838.
- Chemrxiv. Oct 12, 2021.

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

## REFERENCES

[1]. Chen C, et al. Dauricine Attenuates Spatial Memory Impairment and Alzheimer-Like Pathologies by Enhancing Mitochondrial Function in a Mouse Model of Alzheimer's Disease. *Front Cell Dev Biol.* 2021 Feb 5;8:624339.

[2]. Li W, et al. Dauricine upregulates the chemosensitivity of hepatocellular carcinoma cells: Role of repressing glycolysis via miR-199a:HK2/PKM2 modulation. *Food Chem Toxicol.* 2018 Nov;121:156-165.

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[3]. Yang Z, et al. Dauricine induces apoptosis, inhibits proliferation and invasion through inhibiting NF-kappaB signaling pathway in colon cancer cells. J Cell Physiol. 2010 Oct;225(1):266-75.

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

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