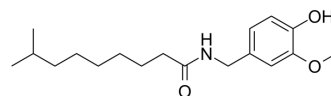


Dihydrocapsaicin

Cat. No.:	HY-N0361
CAS No.:	19408-84-5
Molecular Formula:	C ₁₈ H ₂₉ NO ₃
Molecular Weight:	307.43
Target:	TRP Channel
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 250 mg/mL (813.19 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
		1 mM		3.2528 mL	16.2639 mL	32.5277 mL
		5 mM		0.6506 mL	3.2528 mL	6.5055 mL
		10 mM		0.3253 mL	1.6264 mL	3.2528 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: ≥ 6.25 mg/mL (20.33 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 6.25 mg/mL (20.33 mM); Clear solution					
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 6.25 mg/mL (20.33 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	Dihydrocapsaicin, a capsaicin, is a potent and selective TRPV1 (transient receptor potential vanilloid channel 1) agonist. Dihydrocapsaicin reduces AIF, Bax, and Caspase-3 expressions, and increased Bcl-2, Bcl-xL and p-Akt levels. Dihydrocapsaicin enhances the hypothermia-induced neuroprotection following ischemic stroke via PI3K/Akt regulation in rat ^{[1][2][3]} .
In Vitro	Dihydrocapsaicin (0-100 μM) inhibits platelet aggregation and the activity of clotting factors VIII:C (6.26-100 μM) and IX (25-100 μM) ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Dihydrocapsaicin (0.5 mg/kg, IP, once) exhibits hypothermic effect and neuroprotection in rat MCAO models^[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Sprague-Dawley rats (adult, male, 300-340 g, subjected to right middle cerebral artery occlusion (MCAO) ^[2]
Dosage:	0.5 mg/kg
Administration:	IP, once
Result:	Exhibits hypothermic effect, rectal temperature dropped to approximately 35.0 °C at 30 min, stayed at equal or below 35.0 °C for approximately 20 min, and then gradually returned to approximately 36.5 °C at 120 min. Significantly reduced Ischemia-reperfusion induced infarct volume (36.2% ± 2.5%). Reduces ROS levels at 24 h, and reduced ischemia-reperfusion induced a high level of cell death.

REFERENCES

- [1]. Adams MJ, et al. Effect of capsaicin and dihydrocapsaicin on in vitro blood coagulation and platelet aggregation. *Thromb Res.* 2009 Dec;124(6):721-3.
- [2]. Gao F, et al. Impairment in function and expression of transient receptor potential vanilloid type 4 in Dahl salt-sensitive rats: significance and mechanism. *Hypertension.* 2010 Apr;55(4):1018-25.
- [3]. Dihydrocapsaicin, et al. Dihydrocapsaicin (DHC) enhances the hypothermia-induced neuroprotection following ischemic stroke via PI3K/Akt regulation in rat. *Brain Res.* 2017 Sep 15;1671:18-25.

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

India Contact:

Life Technologies (India) Pvt. Ltd.

306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400, Fax: +91-11-42208444

Email: customerservice@lifetechindia.com Website: www.lifetechindia.com