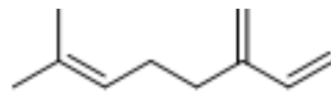


Myrcene

Cat. No.:	HY-N0803
CAS No.:	123-35-3
Molecular Formula:	C ₁₀ H ₁₆
Molecular Weight:	136.23
Target:	NF-κB
Pathway:	NF-κB
Storage:	-20°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

Ethanol : ≥ 100 mg/mL (734.05 mM)
 DMSO : 100 mg/mL (734.05 mM; Need ultrasonic)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	7.3405 mL	36.7026 mL	73.4053 mL
	5 mM	1.4681 mL	7.3405 mL	14.6811 mL
	10 mM	0.7341 mL	3.6703 mL	7.3405 mL

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

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (18.35 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (18.35 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (18.35 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Myrcene (β-Myrcene) is a type of aromatic compound that inhibits TNFα and NF-κB activity. Myrcene has anti-invasive action, inhibits cell cycle, and leads to cancer cell apoptosis. Myrcene has strong blood protection effect, anti-inflammation, and anti-inflammatory activity^{[1][2][3][4][5]}.

IC₅₀ & Target

NF-κB

In Vitro

Myrcene (50 μM, 100 μM; 24 h, 48 h) inhibits 10 ng/mL TNFα-induced NF-κB activity, through causing the inactivation of IKK

	<p>in MDA-MB-231 cells^[2]. Myrcene (0.25-1.0 µg/mL; 24 h, 48 h) inhibits clonal sphere formation in A549 cells, and arrests cell cycle in the G0/G1 phases to cause apoptosis^[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>
In Vivo	<p>Myrcene (100 mg/kg, 200 mg/kg; ip; 30 days) can improve the effects of AlCl₃ (5 mg/kg; p. o.) and D-galactose (60 mg/kg; i. p.) in mice. Alleviates neurobehavioral and neuropathological effect^[4]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

REFERENCES

- [1]. Eunson Hwang, et al. Myrcene, an Aromatic Volatile Compound, Ameliorates Human Skin Extrinsic Aging via Regulation of MMPs Production. *Am J Chin Med.* 2017;45(5):1113-1124.
- [2]. Jeong-Ho Lee, et al. Anti-invasive effect of β-myrcene, a component of the essential oil from *Pinus koraiensis* cones, in metastatic MDA-MB-231 human breast cancer cells. *Journal of the Korean Society for Applied Biological Chemistry* volume 58, pages563–569.
- [3]. Bai X, et al. Myrcene exhibits antitumor activity against lung cancer cells by inducing oxidative stress and apoptosis mechanisms[J]. *Natural Product Communications*, 2020, 15(9): 1934578X20961189.
- [4]. Islam AUS, et al. Myrcene Attenuates Renal Inflammation and Oxidative Stress in the Adrenalectomized Rat Model. *Molecules.* 2020 Sep 30;25(19):4492.
- [5]. Kumar R, et al. Ameliorative effect of myrcene in mouse model of Alzheimer's disease. *Eur J Pharmacol.* 2021 Nov 15;911:174529.
-

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

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