

Citronellal

Chemical Properties

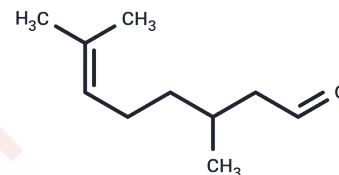
CAS No. : 106-23-0

Formula: C₁₀H₁₈O

Molecular Weight: 154.25

Storage: Pure form: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	Citronellal ((±)-Citronellal) is a monoterpene predominantly formed by the secondary metabolism of plants, producing antithrombotic, antiplatelet, and antihypertensive activities.
Targets(IC50)	Others,Potassium Channel
In vitro	Administrations of Citronellal(CT) (50, 100, and 150?mg/kg) as well as lovastatin dramatically reduced the size of carotid atherosclerotic plaque in rats in a dose-dependent manner, compared with atherosclerotic rats fed with a high-fat diet plus balloon injury and vitamin D3. Mechanically, CT improved endothelial dysfunction, increased cell migration, and suppressed oxidative stress and inflammation in vascular endothelium in rats feeding on the high-fat diet plus balloon injury. Further, CT downregulated the protein levels of sodium-hydrogen exchanger 1 in rats with atherosclerosis[1].
Cell Research	An AS model in carotid artery was induced by balloon injury and vitamin D3 injection in rats fed with a high-fat diet. The size of the carotid atherosclerotic plaque was determined by ultrasound, oil red, and hematoxylin-eosin staining. Endothelial function was assessed by measuring acetylcholine-induced vessel relaxation in an organ chamber[1].

Solubility Information

Solubility	DMSO: 30 mg/mL (194.49 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (12.97 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	6.483 mL	32.4149 mL	64.8298 mL
5 mM	1.2966 mL	6.483 mL	12.966 mL
10 mM	0.6483 mL	3.2415 mL	6.483 mL
50 mM	0.1297 mL	0.6483 mL	1.2966 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Lu J X , Guo C , Ou W S , et al. Citronellal prevents endothelial dysfunction and atherosclerosis in rats[J]. Journal of Cellular Biochemistry, 2018.

Araújo-Filho JV, Ribeiro WLC, André WPP, et al. Anthelmintic activity of Eucalyptus citriodora essential oil and its major component, citronellal, on sheep gastrointestinal nematodes. Rev Bras Parasitol Vet. 2019 Nov 25. pii: S1984-29612019005022101.

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