

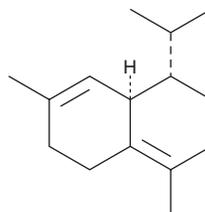
PRODUCT INFORMATION



(+)- δ -Cadinene

Item No. 34444

CAS Registry No.: 483-76-1
Formal Name: 1S,2,3,5,6,8aR-hexahydro-4,7-dimethyl-1-(1-methylethyl)-naphthalene
MF: C₁₅H₂₄
FW: 204.4
Purity: \geq 95%
UV/Vis.: λ_{\max} : 250 nm
Supplied as: A liquid
Storage: -20°C
Stability: \geq 4 years
Item Origin: Synthetic



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

(+)- δ -Cadinene is supplied as a liquid. A stock solution may be made by dissolving the (+)- δ -cadinene in the solvent of choice, which should be purged with an inert gas. (+)- δ -Cadinene is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of (+)- δ -cadinene in these solvents is approximately 30 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of (+)- δ -cadinene can be prepared by directly dissolving the liquid in aqueous buffers. The solubility of (+)- δ -cadinene in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

(+)- δ -Cadinene is a sesquiterpene that has been found in upland cotton (*G. hirsutum*) and has antibacterial, insecticidal, and anticancer activities.¹⁻⁴ It is active against *S. pneumoniae* (MIC = 31.25 μ g/ml) and induces mortality in *A. stephensi*, *A. aegypti*, and *C. quinquefasciatus* third instar larvae (LC₅₀s = 8.23, 9.03, and 9.86 μ g/ml, respectively).^{2,3} (+)- δ -Cadinene (10, 50, and 100 μ M) induces apoptosis in and inhibits proliferation of OVCAR-3 human ovarian cancer cells.⁴

References

- Davis, G.D. and Essenberg, M. (+)- δ -Cadinene is a product of sesquiterpene cyclase activity in cotton. *Phytochemistry* **39(3)**, 553-567 (1995).
- Pérez-López, A., Cirio, A.T., Rivas-Galindo, V.M., et al. Activity against *Streptococcus pneumoniae* of the essential oil and δ -cadinene isolated from *Schinus molle* fruit. *J. Essent. Oil Res.* **23(5)**, 25-28 (2011).
- Govindarajan, M., Rajeswary, M., and Benelli, G. δ -Cadinene, calarene and δ -4-carene from *Kadsura heteroclita* essential oil as novel larvicides against malaria, dengue and filariasis mosquitoes. *Comb. Chem. High Throughput Screen.* **19(7)**, 565-571 (2016)
- Hui, L.-M., Zhao, G.-D., and Zhao, J.-J. δ -Cadinene inhibits the growth of ovarian cancer cells via caspase-dependent apoptosis and cell cycle arrest. *Int. J. Clin. Exp. Pathol.* **8(6)**, 6046-6056 (2015).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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