

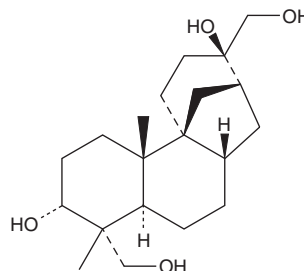
PRODUCT INFORMATION



(+)-Aphidicolin

Item No. 14007

CAS Registry No.: 38966-21-1
Formal Name: (3R,4R,4aR,6aS,8R,9R,11aS,11bS)-tetradecahydro-3,9-dihydroxy-4,11b-dimethyl-8,11a-methano-11aH-cyclohepta[a]naphthalene-4,9-dimethanol
Synonyms: ICI 69653, NSC 234714
MF: C₂₀H₃₄O₄
FW: 338.5
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years
Item Origin: Fungi/*Phoma* sp. BS 7210



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

Laboratory Procedures

(+)-Aphidicolin is supplied as a solid. A stock solution may be made by dissolving the (+)-aphidicolin in the solvent of choice. (+)-Aphidicolin is soluble in organic solvents such as DMSO and methanol, which should be purged with an inert gas. The solubility of (+)-aphidicolin in these solvents is approximately 50 and 10 mg/ml, respectively.

Description

(+)-Aphidicolin is a natural tetracyclic diterpene first isolated from the fungus *C. aphidicola* and shown to have antiviral activity against herpes simplex.¹ In eukaryotic cells, it is a cell-permeable, reversible inhibitor of DNA replication, specifically blocking the activity of DNA polymerases α , δ , and ϵ when used at low micromolar levels.²⁻⁴ Aphidicolin can be used, at 3 μ M, to arrest cells in G₁/S phase or to increase gene amplification frequency.^{5,6}

References

1. Bucknall, R.A., Moores, H., Simms, R., *et al.* Antiviral effects of aphidicolin, a new antibiotic produced by *Cephalosporium aphidicola*. *Antimicrob. Agents Chemother.* **4(3)**, 294-298 (1973).
2. Oguro, M., Suzuki-Hori, C., Nagano, H., *et al.* The mode of inhibitory action by aphidicolin on eukaryotic DNA polymerase α . *Eur. J. Biochem.* **97(2)**, 603-607 (1979).
3. Krokan, H., Wist, E., and Krokan, R.H. Aphidicolin inhibits DNA synthesis by DNA polymerase α and isolated nuclei by a similar mechanism. *Nucleic Acids Res.* **9(18)**, 4709-4719 (1981).
4. Cheng, C.-H. and Kuchta, R.D. DNA polymerase ϵ : Aphidicolin inhibition and the relationship between polymerase and exonuclease activity. *Biochemistry* **32(33)**, 8568-8574 (1993).
5. Kota, K.P., Benko, J.G., Mudhasani, R., *et al.* High content image based analysis identifies cell cycle inhibitors as regulators of Ebola virus infection. *Viruses* **4(10)**, 1865-1877 (2012).
6. Yin, D.X. and Schimke, R.T. Inhibition of apoptosis by overexpressing Bcl-2 enhances gene amplification by a mechanism independent of aphidicolin pretreatment. *Proc. Natl. Acad. Sci. USA* **93(8)**, 3394-3398 (1996).

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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