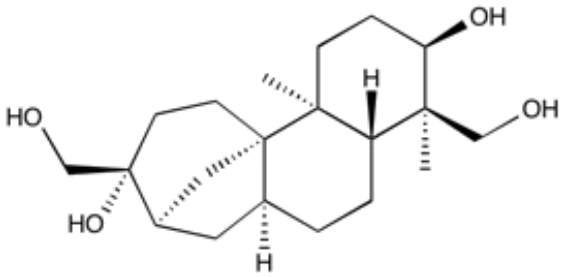
Catalog # 10-2058

Aphidicolin

38966-21-1

(3*R*,4*R*,4a*R*,6a*S*,8*R*,9*R*,11a*S*,11b*S*)-Tetradecahydro-3,9-dihydroxy-4,11b-dimethyl-8,11a-methano-11aH-cyclohepta[*a*]naphthalene-4,9-dimethanol

Lot # X101504



Aphidicolin specifically inhibits DNA polymerase α and δ via binding to the enzyme, in eukaryotic cells such as the HeLa cell line, without affecting other DNA polymerases[1]. Arrests cell cycle at early S phase while allowing continued cell growth[2]. Potentiates apoptosis induction induced by other agents[3]. Increases gene amplification frequency in HeLa S3 cells overexpressing Bcl-2[4].

1) Syvaoja *et al*. (1990), *DNA polymerases alpha, delta, and epsilon: three distinct enzymes from HeLa cells*; Proc. Natl. Acad. Sci. USA, **87** 6664
2) Urbani *et al*. (1995), *Dissociation of nuclear and cytoplasmic cell cycle progression by drugs employed in cell synchronization*; Exp. Cell Res., **219** 159
3) Kuwakado *et al*. (1993), *Aphidicolin potentiates apoptosis induced by arabinosyl nucleosides in human myeloid leukemia cell lines;* Biochem. Pharmacol., **46** 1909
4) Yin and Schimke (1996), *Inhibition of apoptosis by overexpressing Bcl-2 enhances gene amplification by a mechanism independent of aphidicolin pretreatment*; Proc. Natl. Acad. Sci. USA, **93** 3394

PHYSICAL DATA

Molecular Weight:	338.48
Molecular Formula:	$C_{20}H_{34}O_4$
Purity:	98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (up to 10mg/ml), Ethanol (up to 1 mg/ml)
Physical Description:	White solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 2 years from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 1 month.

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