

Store at
-20°C
#32774

Aphidicolin

1 mg

**Orders:** 877-616-CELL (2355)
orders@cellsignal.com**Support:** 877-678-TECH (8324)**Web:** info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Background

Aphidicolin is a tetracyclic diterpenoid first produced by the fungus *Cephalosporium aphidicola*. This antibiotic is a potent inhibitor of cellular deoxyribonucleic acid (DNA) synthesis by targeting α , ϵ , and δ DNA polymerases in eukaryotic cells lines with little to no effect on β or γ DNA polymerases (1,2). Studies have shown that Aphidicolin specifically binds to α DNA polymerase, resulting in the formation of a pol α -DNA-aphidicolin ternary complex that blocks DNA replication. The uses for this compound include synchronized cells at the G1/S boundary and increased gene amplification (3-6).

Molecular Formula

C₂₀H₃₄O₄

Molecular Weight

338.5 g/mol

Purity

>98%

CAS

38966-21-1

Solubility

Soluble in DMSO at 10 mg/ml or ethanol at 1 mg/ml.

Storage

Store lyophilized at -20°C, desiccated. In lyophilized form, the chemical is stable for 24 months. Once in solution, store at -20°C and use within 1 month to prevent loss of potency. *Aliquot to avoid multiple freeze/thaw cycles.*

Directions for Use

Aphidicolin is supplied as a lyophilized powder. For a 5 mM stock, reconstitute 1 mg of powder in 590 μ l of DMSO. Working concentrations and length of treatment can vary depending on the desired effect.

Background References

1. Longiaru, M. et al. (1979) *Nucleic Acids Res* 6, 3369-86.
2. Syväoja, J. et al. (1990) *Proc Natl Acad Sci U S A* 87, 6664-8.
3. Dinter-Gottlieb, G. and Kaufmann, G. (1983) *J Biol Chem* 258, 3809-12.
4. Sheaff, R. et al. (1991) *Biochemistry* 30, 8590-7.
5. Kota, K.P. et al. (2012) *Viruses* 4, 1865-77.
6. Yin, D.X. and Schimke, R.T. (1996) *Proc Natl Acad Sci U S A* 93, 3394-8.

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with

respect to any third party products or services used by Customer in connection with the Products.