

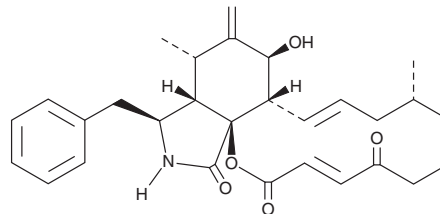
PRODUCT INFORMATION



Cytochalasin A

Item No. 11327

CAS Registry No.: 14110-64-6
Formal Name: (3E,9R,11E,12aS,13S,15S,15aS,16S,18aS)-6,7,8,9,10,12a,13,14,15,15a,16,17-dodecahydro-13-hydroxy-9,15-dimethyl-14-methylene-16-(phenylmethyl)-2H-oxacyclotetradecino[2,3-d]isoindole-2,5,18-trione
Synonyms: Dehydrophomin, NSC 174119, Phomin
MF: C₂₉H₃₅NO₅
FW: 477.6
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Cytochalasin A is supplied as a crystalline solid. A stock solution may be made by dissolving the cytochalasin A in the solvent of choice, which should be purged with an inert gas. Cytochalasin A is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of cytochalasin A in DMF is approximately 30 mg/ml and approximately 20 mg/ml in ethanol and DMSO.

Cytochalasin A is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, cytochalasin A should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Cytochalasin A has a solubility of approximately 0.05 mg/ml in a 1:20 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

The cytochalasins are cell-permeable fungal metabolites which inhibit actin polymerization.¹⁻⁴ This interferes with such diverse processes as cell movement, growth, phagocytosis, degranulation, and secretion.⁵⁻⁸ Cytochalasin A is an oxidized analog of cytochalasin B that uniquely inhibits HIV-1 protease (IC₅₀ = 3 μM).⁹ Cytochalasins A and B differ from other cytochalasins in being able to rapidly and reversibly inhibit glucose transport by competitively binding glucose transporters (K_i = 4.0 and 0.6 μM, respectively).^{10,11} Cytochalasin A also induces the phosphorylation of the tyrosine phosphatase PTP3 of *Dictyostelium*, activating STATc.¹²

References

1. Brenner, S.L. and Korn, E.D. *J. Biol. Chem.* **255**(3), 841-844 (1980).
2. Lin, D.C., Tobin, K.D., Grumet, M., et al. *J. Cell Biol.* **84**, 455-460 (1980).
3. Ostlund, R.E., Jr., Leung, J.T., and Hajek, S.V. *J. Cell Biol.* **85**, 386-391 (1980).
4. Pinder, J.C. and Gratzner, W.B. *J. Cell Biol.* **96**(3), 768-775 (1983).
5. Flaumenhaft, R., Dilks, J.R., Rozenvayn, N., et al. *Blood* **105**(10), 3879-3887 (2005).
6. Taheri-Talesh, N., Horio, T., Araujo-Bazán, L., et al. *Mol. Biol. Cell* **19**, 1439-1449 (2008).
7. dos Santos, T., Varela, J., Lynch, I., et al. *PLoS One* **6**(9), 1-10 (2011).
8. Nightingale, T.D., White, I.J., Doyle, E.L., et al. *J. Cell Biol.* **194**(4), 613-629 (2011).
9. Lingham, R.B., Hsu, A., Silverman, K.C., et al. *J. Antibiot. (Tokyo)* **45**(5), 686-691 (1992).
10. Kletzien, R.F., Perdue, J.F., and Springer, A. *J. Biol. Chem.* **247**(9), 2964-2966 (1972).
11. Griffin, J.F., Rampal, A.L., and Jung, C.Y. *Proc. Natl. Acad. Sci. USA* **79**, 3759-3763 (1982).
12. Araki, T. and Williams, J.G. *Eur. J. Cell Biol.* **91**(5), 420-425 (2012).

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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