

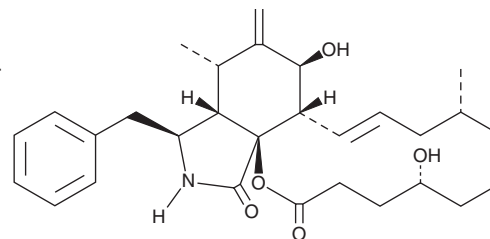
PRODUCT INFORMATION



Dihydrocytochalasin B

Item No. 20845

CAS Registry No.: 39156-67-7
Formal Name: (5R,9R,11E,12aS,13S,15S,15aS,16S,18aS)-4,5,6,7,8,9,10,12a,13,14,15,15a,16,17-tetradecahydro-5,13-dihydroxy-9,15-dimethyl-14-methylene-16-(phenylmethyl)-2H-oxacyclotetradecino[2,3-d]isoindole-2,18(3H)-dione
Synonym: DCB
MF: C₂₉H₃₉NO₅
FW: 481.6
Purity: ≥95%
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

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

DCB is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, DCB should first be dissolved in DMF and then diluted with the aqueous buffer of choice. DCB 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

DCB is a member of the cytochalasin mycotoxin family that inhibits actin assembly.¹ It blocks cleavage furrow formation and cytokinesis in synchronous HeLa cells at a concentration of 10 μM. DCB induces tetraploidy and arrests the cell cycle indefinitely in the G₁ phase in REF-52 cells.² It also increases the drug sensitivity of multidrug resistant SKVLB1 cells to paclitaxel (Item No. 10461) and doxorubicin (Item No. 15007) *in vitro*.³

References

1. Martineau, S.N., Andreassen, P.R., and Margolis, R.L. Delay of HeLa cell cleavage into interphase using dihydrocytochalasin B: Retention of a postmitotic spindle and telophase disc correlates with synchronous cleavage recovery. *J. Cell. Biol.* **131**(1), 191-205 (1995).
2. Andreassen, P.R., Lohez, O.D., Lacroix, F.B., *et al.* Tetraploid state induces p53-dependent arrest of nontransformed mammalian cells in G₁. *Mol. Biol. Cell* **12**(5), 1315-1328 (2001).
3. Trendowski, M., Christen, T.D., Acquafondata, C., *et al.* Effects of cytochalasin congeners, microtubule-directed agents, and doxorubicin alone or in combination against human ovarian carcinoma cell lines *in vitro*. *BMC Cancer* **15**:632 (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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