

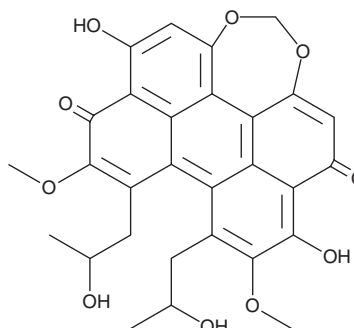
PRODUCT INFORMATION



Cercosporin

Item No. 22175

CAS Registry No.: 35082-49-6
Formal Name: (13bR)-6,12-dihydroxy-8,9-bis[(2R)-2-hydroxypropyl]-7,10-dimethoxyperyllo[1,12-def]-1,3-dioxepin-5,11-dione
Synonyms: CGP 049090, NSC 153111
MF: C₂₉H₂₆O₁₀
FW: 534.5
Purity: ≥95%
UV/Vis.: λ_{max}: 225, 269, 470 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Fungus/*Cercospora* sp.



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

Laboratory Procedures

Cercosporin is supplied as a solid. A stock solution may be made by dissolving the cercosporin in the solvent of choice, which should be purged with an inert gas. Cercosporin is soluble in ethanol, DMSO, and dimethyl formamide.

Description

Cercosporin is a pigmented phytotoxin isolated from the fungus *C. kikuchii* that produces reactive oxygen species in plant hosts leading to cellular damage.^{1,2} It exhibits light-activated cytotoxic effects *in vitro* with cytotoxic concentration (CC₅₀) values of 241, 282, and 174 nM in HeLa, A432, and MCF-7 cells, respectively.³ It is a selective inhibitor of PKC (IC₅₀ = 600-1,300 nM) with no activity on PKA or PPK at concentrations over 180 μM.⁴

References

1. Shimpei, K. and Tamura, T. Cercosporin. A pigment of *Cercosporina kikuchii mafsumofo et tomoyasu*. I. Cultivation of fungus, isolation and purification of pigment. *J. Am. Chem. Soc.* **79(21)**, 5725-5726 (1957).
2. Williamson, J.D. and Scandalios, J.G. Plant antioxidant gene responses to fungal pathogens. *Trends Microbiol.* **1(6)**, 239-245 (1993).
3. Vandenbogaerde, A.L., Delaey, E.M., Vantieghem, A.M., et al. Cytotoxicity and antiproliferative effect of hypericin and derivatives after photosensitization. *Photochem. Photobiol.* **67(1)**, 119-125 (1998).
4. Morgan, B.J., Dey, S., Johnson, S.W., et al. Design, synthesis, and investigation of protein kinase C inhibitors: Total syntheses of (+)-calphostin D, (+)-phleichrome, cercosporin, and new photoactive perylenequinones. *J. Am. Chem. Soc.* **131(26)**, 9413-9425 (2009).

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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