

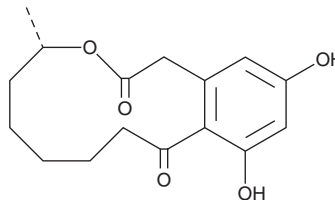
PRODUCT INFORMATION



Curvularin

Item No. 21758

CAS Registry No.: 10140-70-2
Formal Name: (4S)-4,5,6,7,8,9-hexahydro-11,13-dihydroxy-4-methyl-2H-3-benzoxacyclododecin-2,10(1H)-dione
Synonyms: (-)-Curvularin, (S)-Curvularin, NSC 166071
MF: C₁₆H₂₀O₅
FW: 292.3
Purity: ≥98%
UV/Vis.: λ_{max}: 222, 272, 303 nm
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

Curvularin is supplied as a crystalline solid. A stock solution may be made by dissolving the curvularin in the solvent of choice, which should be purged with an inert gas. Curvularin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of curvularin in ethanol is approximately 10 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Curvularin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, curvularin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Curvularin has a solubility of approximately 0.1 mg/ml in a 1:9 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Curvularin is a natural fungal macrolactone that has cytotoxic activity against select cancer cell lines.^{1,2} It inhibits cytokine-induced expression of induced nitric oxide synthase (iNOS; IC₅₀ = 9.5 μM) *in vitro* and reduces proinflammatory gene expression in a mouse model of rheumatoid arthritis.^{3,4} Curvularin also blocks TGF-β signaling in HepG2 and MDA-MB-231 cells.⁵

References

1. Kumar, C.G., Mongolla, P., Sujitha, P., *et al.* Metabolite profiling and biological activities of bioactive compounds produced by *Chrysosporium lobatum* strain BK-3 isolated from Kaziranga National Park, Assam, India. *Springerplus* **2**(1), 122 (2013).
2. Zhan, J., Wijeratne, E.M., Seliga, C.J., *et al.* A new anthraquinone and cytotoxic curvularins of a *Penicillium* sp. from the rhizosphere of *Fallugia paradoxa* of the Sonoran desert. *J. Antibiot. (Tokyo)* **57**(5), 341-344 (2004).
3. Horuk, R. Chemokine receptor antagonists: Overcoming developmental hurdles. *Nat. Rev. Drug Discov.* **8**(1), 23-33 (2009).
4. Schmidt, N., Art, J., Forsch, I., *et al.* The anti-inflammatory fungal compound (S)-curvularin reduces proinflammatory gene expression in an *in vivo* model of rheumatoid arthritis. *J. Pharm. Exp. Ther.* **343**(1), 106-114 (2012).
5. Rudolph, K., Serwe, A., and Erkel, G. Inhibition of TGF-β signaling by the fungal lactones (S)-curvularin, dehydrocurvularin, oxacyclododecindione and galiellalactone. *Cytokine* **61**(1), 285-296 (2013).

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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM