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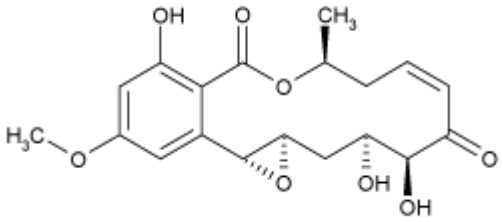
Product Information

Hypothemycin from *Hypomyces trichothecoides*

Catalog Number **H1667**
Storage Temperature −20 °C

CAS RN 76958-67-3



Molecular Weight: 378.37
Molecular formula: $C_{19}H_{22}O_8$

Product Description
Hypothemycin is one of the highly oxygenated analogues in the group of 14-membered resorcylic acid lactones (RAL).[1-3] Hypothemycin was reported to have minor antifungal and cytotoxic activity.[2,3] Moreover it exhibits an *in vitro* anti-malarial activity with an IC_{50} of 2.2 μg/mL.[4] It was also reported to selectively and irreversibly inhibit protein kinases that contain a conserved cystein residue (Cys^{166}) that is located within the ATP-binding domain.[1-3,5,6] Though this group accounts for less then 10% of all identified kinases, there are several targets implicated in aberrant cellular proliferation such as ERKs, MEK, FMS-like tyrosine kinase protein (FLT) and platelet-derived growth factor receptors (PDGFR).[1] In cell culture, Hypothemycin displays potent cytotoxicity against cancer cell lines that are dependent on certain activating kinase mutations. Additionally, Hypothemycin demonstrates significant tumor growth inhibition in at least three separate murine xenograft models.[1, 6] Hypothemycin also inhibits the production of several cytokines such as IL2, IL6, IFNγ and TNFα.[6]

Purity: ≥98% by HPLC

Reconstitution instructions
Soluble in DMSO and Acetone insoluble in water. DMSO solution should be stored at –20 °C

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability
Store the product sealed at –20 °C. Under these conditions the product is stable for at least 2 years.

References
1. Hearn, B.R., et al., Semisynthesis and cytotoxicity of Hypothemycin analogues. *ChemMedChem,* **2**, 1598-1600 (2007).
2. Isaka, M., et al., Aigialomycin and related polyketide metabolites from the mangrove fungus *Aigialus parvus* BCC 5311. *Tetrahedron,* **65**, 4396-4403 (2009).
3. Wee, J.L., et al., Cytotoxic Hypothemycin analogues from *Hypomyces subiculosus*. *J. Nat. Prod.*, **69**, 1456-1459 (2006).
4. Isaka, M., et al., Aigialomycins A-E, new resorcylic macrolides from the marine mangrove fungus Aigialus parvus. *J. Org. Chem.*, **67,** 1561-1566 (2002).
5. Reeves, C.D., et al., Genes for the biosynthesis of the fungal polyketides Hypothemycin from *Hypomyces subiculosus* and Radicicol from *Pochonia chlamydosporia.* **74**, 5121-5129 (2008).
6. Winssinger, N., and Barluenga, S., Chemistry and biology of resorcyclic acid lactones. *Chem. Commun.,* 22-36 (2007).

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