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Produktinformation

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- Laborgeräte & Service

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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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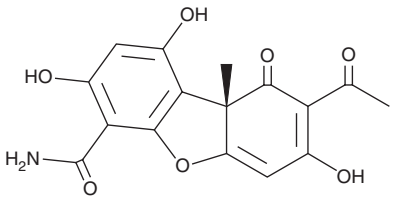
PRODUCT INFORMATION

Cercosporamide

Item No. 15500

CAS Registry No.: 131436-22-1
Formal Name: (9aS)-8-acetyl-9,9a-dihydro-1,3,7-trihydroxy-9a-methyl-9-oxo-4-dibenzofurancarboxamide
MF: $C_{16}H_{13}NO_7$
FW: 331.3
Purity: ≥95%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Fungus/*Cercosporidium* sp.



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

Laboratory Procedures

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

Description

Cercosporamide is a natural antifungal phytotoxin isolated from the *Cercosporidium* fungus, which infects the leaves of cassava plants.[1] Its antifungal effect results from its selective and potent inhibition of fungal PKC-like 1 kinases (Pkc1), which are central to cell wall integrity (IC_{50} = 25 nM for *Candida* Pkc1).[2] Cercosporamide less effectively inhibits human PKC isoforms PKCα, β, and γ (IC_{50}s = 1.02, 0.35, and 5.8 µM, respectively), an action linked to lowering of plasma glucose in hyperglycemic mice.[2,3] However, it potently inhibits MAPK-interacting kinases Mnk1 and Mnk2 (IC_{50} = 115 and 11 nM, respectively), reducing protein translation in cancer cells.[4,5] Cercosporamide is orally bioavailable.[2,3]

References

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3. Furukawa, A., Arita, T., Satoh, S., *et al*. (-)-Cercosporamide derivatives as novel antihyperglycemic agents. *Bioorg. Med. Chem. Lett*. **19(3)**, 724-726 (2009).
4. Konicek, B.W., Stephens, J.R., McNulty, A.M., *et al*. Therapeutic inhibition of MAP kinase interacting kinase blocks eukaryotic initiation factor 4E phosphorylation and suppresses outgrowth of experimental lung metastases. *Cancer Res*. **71(5)**, 1849-1857 (2011).
5. Hou, J., Lam, F., Proud, C., *et al*. Targeting Mnks for cancer therapy. *Oncotarget* **3(2)**, 118-131 (2012).

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