

Product Data Sheet

Product Name: Fumonisin B1

Cat. No.: GC12604

Chemical Properties

Cas. No. 116355-83-0

Chemical Name 2-[2-[19-amino-6-(3,4-dicarboxybutanoyloxy)-11,16,18-trihydroxy-5,9-dimethylcosan-7-yloxy-2-oxoethyl]butanedioic acid

SMILES CCCCC(C)C(C(CC(C)CC(CCCCC(CC(C(C)N)O)O)O)OC(=O)CC(CC(=O)O)C(=O)O)OC(=O)CC(CC(=O)O)C(=O)O

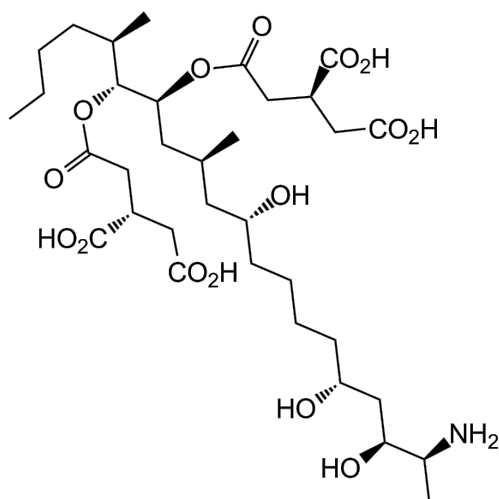
Formula $C_{34}H_{59}NO_{15}$ M.Wt 721.83

Solubility 10mg/mL in Ethanol; 5 mg/ml in DMSO; 5 mg/ml in DMF; PBS pH 7.2: 1 mg/ml
Storage Store at -20°C, Keep away from moisture, Sealed

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

Fumonisin B1 is a mycotoxin produced from *F. moniliforme*, a prevalent fungus of corn and other

Caution: Product has not been fully validated for medical applications. For research use only.

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grains. Outbreaks of food poisoning in livestock and humans following the consumption of *Fusarium* infested corn are caused by fumonisins.[1] It functions as an inhibitor of ceramide synthase (sphingosine N-acyltransferase).[2] Fumonisin B1 attenuates the response of P388D1 cells to PAF and LPS by inhibiting ceramide formation.[3] It also blocks the apoptotic response of HaCaT cells to the antiproliferative drug hexadecylphosphocholine, again through inhibition of ceramide production. [4] Incubation of Swiss 3T3 cells with fumonisin B1 results in both an altered cell morphology due to disruption of axonal growth and a decrease in cell proliferation.[5]

Reference:

- [1]. Gelderblom, W.C.A., Jaskiewicz, K., Marasas, W.F.O., et al. Fumonisin - novel mycotoxins with cancer-promoting activity produced by *Fusarium moniliforme*. *Applied and Environmental Microbiology* 54, 1806-1811 (1988).
- [2]. Wang, E., Norred, W.P., Bacon, C.W., et al. Inhibition of sphingolipid biosynthesis by fumonisins. Implications for diseases associated with *Fusarium moniliforme*. *J. Biol. Chem.* 266(22), 14486-14490 (1991).
- [3]. Balsinde, J., Balboa, M.A., and Dennis, E.A. Inflammatory activation of arachidonic acid signaling in murine P388D1 macrophages via sphingomyelin synthesis. *The Journal of Biological Chemistry* 272, 20373-20377 (1997).
- [4]. Wieder, T., Orfanos, C.E., and Geilen, C.C. Induction of ceramide-mediated apoptosis by the anticancer phospholipid analog, hexadecylphosphocholine. *The Journal of Biological Chemistry* 273, 11025-11031 (1998).
- [5]. Meivar-Levy, I., Sbanay, H., Bershadsky, A.D., et al. The role of sphingolipids in the maintenance of fibroblast morphology. The inhibition of protrusional activity, cell spreading, and cytokinesis induced by fumonisin B1 can be reversed by ganglioside GM3. *The Journal of Biological Chemistry* 272, 1558-1564 (1997).

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