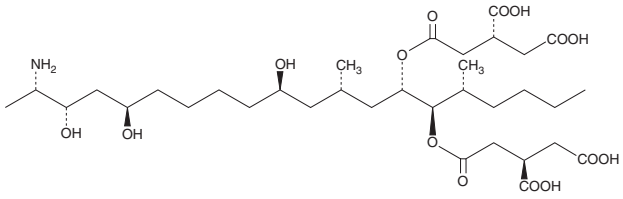
PRODUCT INFORMATION

Fumonisin B_1

Item No. 62580

CAS Registry No.: 116355-83-0
Formal Name: (2R,2'R)-1,2,3-propanetricarboxylic acid, 1,1'-[(1S,2R)-1-[(2S,4R,9R,11S,12S)-12-amino-4,9,11-trihydroxy-2-methyltridecyl]-2-[(1R)-1-methylpentyl]-1,2-ethanediyl] ester
Synonym: FB_1
MF: $C_{34}H_{59}NO_{15}$
FW: 721.8
Purity: ≥95%
Supplied as: A crystalline solid
Storage: -20°C
Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



Laboratory Procedures

Fumonisin B_1 is supplied as a crystalline solid. A stock solution may be made by dissolving the fumonisin B_1 in an organic solvent purged with an inert gas. Fumonisin B_1 is soluble in solvents such as methanol and acetonitrile. The solubility of fumonisin B_1 in these solvents is approximately 10 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant since organic solvents may have physiological effects at low concentrations. If an organic solvent-free solution of fumonisin B_1 is needed, it can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of fumonisin B_1 in PBS (pH 7.2) is approximately 18.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Fumonisin B_1 is a mycotoxin produced by *F. moniliforme*, a prevalent fungus of corn and other 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 B_1 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 B_1 results in both an altered cell morphology due to disruption of axonal growth and a decrease in cell proliferation.[5]

References

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3. Balsinde, J., Balboa, M.A., and Dennis, E.A. *J. Biol. Chem.* **272**, 20373-20377 (1997).
4. Wieder, T., Orfanos, C.E., and Geilen, C.C. *J. Biol. Chem.* **273**, 11025-11031 (1998).
5. Meivar-Levy, I., Sbanay, H., Bershadsky, A.D., *et al. J. Biol. Chem.* **272**, 1558-1564 (1997).

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