

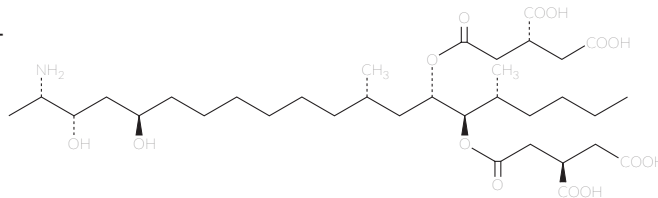
PRODUCT INFORMATION



Fumonisin B₂ Item No. 13227

CAS Registry No.: 116355-84-1
Formal Name: 1,1'-[(1S,2R)-1-[(2S,9R,11S,12S)-12-amino-9,11-dihydroxy-2-methyltridecyl]-2-[(1R)-1-methylpentyl]-1,2-ethanediyl]ester-1,2,3-propanetricarboxylic acid

Synonym: FB₂
MF: C₃₄H₅₉NO₁₄
FW: 705.8
Purity: ≥95%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Fumonisin B₂ (FB₂) is supplied as a crystalline solid. A stock solution may be made by dissolving the FB₂ in the solvent of choice, which should be purged with an inert gas. FB₂ is soluble in solvents such as methanol and acetonitrile. The solubility of FB₂ 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 FB₂ is needed, it can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of FB₂ in PBS (pH 7.2) is approximately 15 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

FB₂ is a mycotoxin that has been found in *F. moniliforme*.¹ It is cytotoxic against a panel of seven rat hepatoma cell lines (IC₅₀S = 3-50 µg/ml), as well as MDCK cells (IC₅₀ = 2 µg/ml).² FB₂ (125-1,000 µM) is also cytotoxic to primary rat hepatocytes and induces hepatocyte nodule formation, a marker of cancer initiation, in rats when administered at a dose of 1,000 mg/kg for 21 days.³ FB₂ has been detected in corn and corn-based foods and livestock feeds.⁴

References

1. Gelderblom, W.C.A., Jaskiewicz, K., Marasas, W.F.O., *et al.* Fumonisin-novel mycotoxins with cancer-promoting activity produced by *Fusarium moniliforme*. *Appl. Environ. Microbiol.* **54(7)**, 1806-1811 (1988).
2. Shier, W.T., Abbas, H.K., and Mirocha, C.J. Toxicity of the mycotoxins fumonisins B₁ and B₂ and *Alternaria alternata* f. sp. *lycopersici* toxin (AAL) in cultured mammalian cells. *Mycopathologia* **116(2)**, 97-104 (1991).
3. Gelderblom, W.C.A., Cawood, M.E., Snyman, S.D., *et al.* Structure-activity relationships of fumonisins in short-term carcinogenesis and cytotoxicity assays. *Food Chem. Toxicol.* **31(6)**, 407-414 (1993).
4. Bullerman, L.B. *Fumonisin in food*. 1st ed., Springer Science, New York (1996).

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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