

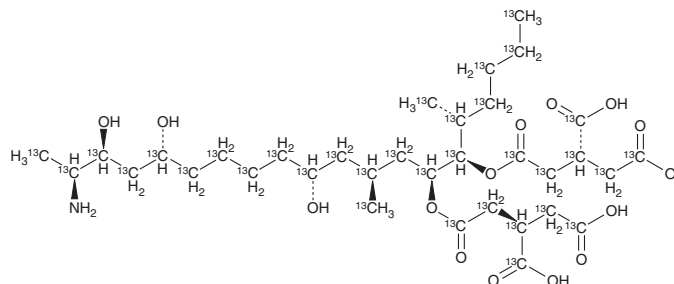
PRODUCT INFORMATION



Fumonisin B₁-¹³C₃₄ Item No. 31272

CAS Registry No.: 1217458-62-2
Formal Name: (2R,2'R)-1,2,3-Propane-1,2,3-¹³C₃-tricarboxylic-1,2,3-¹³C₃ acid, 1,1'-[(1S,2R)-1-[(2S,4R,9R,11S,12S)-12-amino-4,9,11-trihydroxy-2-(methyl-¹³C)tridecyl-1,2,3,4,5,6,7,8,9,10,11,12,13-¹³C₁₃]-2-[(1R)-1-(methyl-¹³C)pentyl-1,2,3,4,5-¹³C₅]-1,2-ethanediyl-1,2-¹³C₂] ester

Synonyms: FB₁-¹³C₃₄
MF: [¹³C]₃₄H₅₉NO₁₅
FW: 755.6
Purity: ≥95%
Supplied as: A 25 µg/ml 1:1 solution in acetonitrile:water
Storage: -20°C
Stability: ≥2 years



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

Description

Fumonisin B₁-¹³C₃₄ (FB₁-¹³C₃₄) is intended for use as an internal standard for the quantification of FB₁ (Item No. 62580) by GC- or LC-MS. FB₁ is a mycotoxin that has been found in *F. moniliforme*.¹ It inhibits ceramide synthase (IC₅₀ = 0.1 µM for the rat liver enzyme).² FB₁ induces DNA fragmentation and apoptosis in CV-1 cells when used at concentrations of 5 and 25 µM, respectively.³ It is cytotoxic to primary rat hepatocytes and induces hepatocyte nodule formation, a marker of cancer initiation, in rats when administered at a dose of 500 mg/kg for 21 days.⁴ It has been detected in corn and corn-based foods and livestock feeds.⁵

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. 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. Ciacci-Zanella, J.R. and Jones, C. Fumonisin B₁, a mycotoxin contaminant of cereal grains, and inducer of apoptosis via the tumour necrosis factor pathway and caspase activation. *Food Chem. Toxicol.* **37(7)**, 703-712 (1999).
4. 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).
5. Bullerman, L.B. Occurrence of *Fusarium* and fumonisins on food grains and in foods. *Fumonisin in food*. Jackson, L.S., DeVries, J.W., Bullerman, L.B., editors, 1st edition, Springer (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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