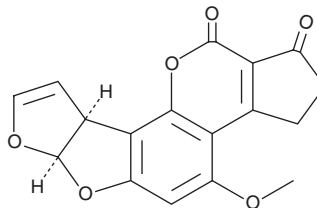


PRODUCT INFORMATION



Aflatoxin B₁ Item No. 11293

CAS Registry No.: 1162-65-8
Formal Name: 2,3,6aR,9aS-tetrahydro-4-methoxy-1H,11H-cyclopenta[c]furo[3',2':4,5]furo[2,3-h][1]benzopyran-1,11-dione
Synonyms: AFB₁, HSDB 3453, NSC 529592
MF: C₁₇H₁₂O₆
FW: 312.3
Purity: ≥98%
UV/Vis.: λ_{max}: 223, 265, 360 nm
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

Aflatoxin B₁ is supplied as a crystalline solid. A stock solution may be made by dissolving the aflatoxin B₁ in the solvent of choice. Aflatoxin B₁ is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of aflatoxin B₁ in DMSO is approximately 12 mg/ml and approximately 20 mg/ml in DMF.

Aflatoxin B₁ is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, aflatoxin B₁ should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Aflatoxin B₁ has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Aflatoxin B₁ (AFB₁) is a genotoxic mycotoxin that has been found in *Aspergillus*.^{1,2} It induces the formation of DNA adducts in rat liver microsomes.¹ AFB₁ induces transversion of guanine to thymine at codon 29 of the p53 tumor suppressor gene, a mutation commonly seen in hepatocellular carcinoma patients living in regions with high levels of aflatoxin contamination, in HepG2 cells.² *In vivo*, AFB₁ (50 and 100 µg/kg) induces hepatocellular carcinoma tumor formation in rats.³

References

1. Essigmann, J.M., Croy, R.G., Nadzan, A.M., *et al.* Structural identification of the major DNA adduct formed by aflatoxin B₁ *in vitro*. *Proc. Natl. Acad. Sci. USA* **74**(5), 1870-1874 (1977).
2. Aguilar, F., Hussain, S.P., and Cerutti, P. Aflatoxin B₁ induces the transversion of G → T in codon 249 of the p53 tumor suppressor gene in human hepatocytes. *Proc. Natl. Acad. Sci. USA* **90**, 8586-8590 (1993).
3. Wogan, G.N., Paglialunga, S., and Newberne, P.M. Carcinogenic effects of low dietary levels of aflatoxin B₁ in rats. *Fd. Cosmet. Toxicol.* **12**(5-6), 681-685 (1974).

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.

WARRANTY AND LIMITATION OF REMEDY

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