SANTA CRUZ BIOTECHNOLOGY, INC.

Aflatoxin B1 (6A10): sc-66016

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Aflatoxin is a naturally occurring mycotoxin produced by two types of mold: *Aspergillus flavus* and *Aspergillus parasiticus*. *Aspergillus flavus* is common and most often found when certain grains are grown under stressful conditions such as drought. The mold occurs in soil, decaying vegetation and in hay and grains undergoing microbiological deterioration. It invades all types of organic substrates whenever and wherever the conditions are favorable for growth, specifically high moisture content and high temperature. At least 13 different types of Aflatoxin are produced in nature and Aflatoxin B1 is considered the most toxic. While the presence of *Aspergillus flavus* does not necessarily indicate harmful levels of Aflatoxin, it is a warning that Aflatoxin may be produced.

REFERENCES

1. Montero,R., et al. 2003. Infection of rats with *Taenia taeniaeformis* metacestodes increases hepatic CYP450, induces the activity of CYP1A1, CYP2B1 and COH isoforms and increases the genotoxicity of the procarcinogens benzo[a]pyrene, cyclophosphamide and Aflatoxin B1. Mutagenesis 18: 211-216.
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3. Tedesco, D., et al. 2004. Efficacy of silymarin-phospholipid complex in reducing the toxicity of Aflatoxin B1 in broiler chicks. Poult. Sci. 83: 1839-1843.
4. Rasooli, I. and Owlia, P. 2005. Chemoprevention by thyme oils of *Aspergillus parasiticus* growth and Aflatoxin production. Phytochemistry 66: 2851-2856.
5. Szkudelska, K., et al. 2005. Lack of the effect of mycotoxins-Aflatoxin B1 and ochratoxin A on some functions of rat adipocytes. Toxicol. In Vitro 19: 771-777.
6. Sayed, H.A., et al. 2005. A cross sectional study of hepatitis B, C, some trace elements, heavy metals, Aflatoxin B1 and schistosomiasis in a rural population, Egypt. J. Egypt. Public Health Assoc. 80: 355-388.
7. Bradshaw, R.E., et al. 2006. A polyketide synthase gene required for biosynthesis of the Aflatoxin-like toxin, dothistromin. Mycopathologia 161: 283-294.
8. Ghitakou, S., et al. 2006. Study of Aflatoxin B1 and ochratoxin A production by natural microflora and *Aspergillus parasiticus* in black and green olives of Greek origin. Food Microbiol. 23: 612-621.
9. Kaaya, A.N. and Kyamuhangire, W. 2006. The effect of storage time and agroecological zone on mould incidence and Aflatoxin contamination of maize from traders in Uganda. Int. J. Food Microbiol. 110: 217-223.

SOURCE

Aflatoxin B1 (6A10) is a mouse monoclonal antibody raised against the imidazole ring-opened persistent form of Aflatoxin B1.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Aflatoxin B1 (6A10) is available conjugated to agarose (sc-66016 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-66016 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-66016 PE), fluorescein (sc-66016 FITC), Alexa Fluor® 488 (sc-66016 AF488), Alexa Fluor® 546 (sc-66016 AF546), Alexa Fluor® 594 (sc-66016 AF594) or Alexa Fluor® 647 (sc-66016 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-66016 AF680) or Alexa Fluor® 790 (sc-66016 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, Aflatoxin B1 (6A10) is available conjugated to biotin (sc-66016 B), 200 µg/ml, for WB, IHC(P) and ELISA.

APPLICATIONS

Aflatoxin B1 (6A10) is recommended for detection of Aflatoxin B1 of mouse, rat and human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of Aflatoxin B1: 55 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 2) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

SELECT PRODUCT CITATIONS

1. Wang, F., et al. 2016. RASSF10 is an epigenetically inactivated tumor suppressor and independent prognostic factor in hepatocellular carcinoma. Oncotarget 7: 4279-4297.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.