SANTA CRUZ BIOTECHNOLOGY, INC.

Aflatoxin (AFC-13): sc-69863

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. Egner, P.A., et al. 2003. Chemoprevention with chlorophyllin in individuals exposed to dietary Aflatoxin. Mutat. Res. 523-524: 209-216.
2. 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.
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., et al. 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., et al. 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 (AFC-13) is a mouse monoclonal antibody raised against Aflatoxin of *Aspergillus flavus* origin.

PRODUCT

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

APPLICATIONS

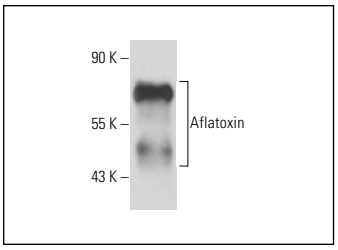
Aflatoxin (AFC-13) is recommended for detection of Aflatoxin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Aflatoxin: 55 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGλ BP-HRP: sc-516132 or m-IgGλ BP-HRP (Cruz Marker): sc-516132-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



Aflatoxin (AFC-13): sc-69863. Western blot analysis of recombinant Aflatoxin.

SELECT PRODUCT CITATIONS

1. Babu, D. and Muriana, P.M. 2011. Immunomagnetic bead-based recovery and real time quantitative PCR (RT iq-PCR) for sensitive quantification of Aflatoxin B1. J. Microbiol. Methods 86: 188-194.
2. Babu, D. and Muriana, P.M. 2014. Sensitive quantification of Aflatoxin B1 in animal feeds, corn feed grain, and yellow corn meal using immunomagnetic bead-based recovery and real-time immunoquantitative-PCR. Toxins 6: 3223-3237.

STORAGE

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

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.