

# Datasheet



Mouse mAb to **Aflatoxin B1 and B2**  
Clone **AFT14 (CBL03)**  
Isotype **IgG2a-κ**

## Source

A BALB/c mouse was immunized with aflatoxin obtained from *Aspergillus*.

## Specifications

AFT14 reacts with Aflatoxin B1 and B2, a 55 kDa protein secreted by *Aspergillus*. The aflatoxins are a group of closely related mycotoxins that are widely distributed in nature. The most important of the group is aflatoxin B1 (AFB1), which has a range of biological activities, including acute toxicity, teratogenicity, mutagenicity and carcinogenicity. In order for AFB1 to exert its effects, it must be converted to its reactive epoxide by the action of the mixed function mono-oxygenase enzyme systems (cytochrome P450-dependent) in the tissues (in particular, the liver) of the affected animal. This epoxide is highly reactive and can form derivatives with several cellular macromolecules, including DNA, RNA, and protein. Cytochrome p450 enzymes may additionally catalyse the hydroxylation (to AFQ1 and AFM1) and demethylation (to AFP1) of the parent AFB1 molecule, resulting in products less toxic than AFB1. Conjugation of AFB1 to glutathione (mediated by glutathione S-transferase) and its subsequent excretion is regarded as an important detoxification pathway in animals. Aflatoxins are well recognized as a cause of liver cancer, but they have additional important toxic effects. Aflatoxin B1 is a potent hepatocarcinogenic and mutagenic mycotoxin of *Aspergillus flavus*.

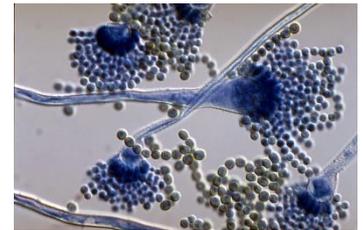


Figure 1: *Aspergillus flavus*

## Species reactivity

*Aspergillus*.

## Applications

Mycotoxins induce a variety of toxic responses in humans and animals when food and feed containing these compounds are ingested. Rapidly quantitating levels of mycotoxin contamination can help reduce exposure to these toxins. This MAb is recommended for detection of aflatoxins of *Aspergillus* origin by solid phase ELISA.

ELISA	RIM	Western blotting
+	+	+

## Format

Produced in tissue culture, contains no host Ig. Antibodies are affinity purified and presented in PBS with 0,02% sodium azide.

Stored at 4°C-8°C, shelf life is at least 24 months after purchase.

## Dilution advice

- ELISA (solid phase: not known; tracer: 0,001-100 µg/ml for 30 min at RT).
- Immunoblotting (50-100 µg/ml for 50 min at RT).
- RIM (solid phase 0,6 mg/ml, tracer: 0,5-1,2 mg/ml).

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## Positive control

Aflatoxin B1 and B2 of *Aspergillus flavus*.

## References

- F S Chu and I Ueno, *Appl Environ Microbiol* **33(5)**: 1125–1128 (1977).
- Groopman, JD. et al, *Proc. Natl. Acad. Sci. USA* **81**: 7728-7731 (1984).