

DM1000**Monoclonal Antibody to Aflatoxin (AFM1+AFB1) - Purified**

Quantity:	0.5 mg
Concentration:	1.0 mg/ml (after reconstitution)
Background:	<p>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.</p>
Host / Isotype:	Rat / IgG2b
Clone:	1C6
Immunogen:	Aflatoxin M1-BSA conjugate
Format:	State: Lyophilized purified Ig fraction Purification: Affinity Chromatography on protein G Buffer System: 0.01M PBS, pH 7.2 without preservatives Reconstitution: Restore in double distilled water to adjust the final concentration to 1.0 mg/ml
Applications:	ELISA (Indirect): Reactive to Aflatoxin M1 (AFM1) and Aflatoxin B1 (AFB1). Fluorimetric Immunoassay: Reactive to Aflatoxin M1 (AFM1) and Aflatoxin M2 (AFM2) (See Reference 1). Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	The selected monoclonal antibodies are reactive to Aflatoxin M1 (AFM1) and Aflatoxin B1 (AFB1), but not reactive to BSA and other irrelevant antigens by ELISA. Similarly, a competitive binding assay using AFM1 as binding competitor to compete with AFM1-BSA-125I showed that AFM1 can effectively inhibit the binding of this monoclonal to AFM1-BSA-125I and the inhibition degree corresponded to the amounts of AFM1 used.
Storage:	Prior to reconstitution store at 2-8°C for one month or at -20°C for longer. Following reconstitution store undiluted at 2-8°C for two weeks or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing. Shelf life: one year from despatch.

General Readings:

1. Lizy Kanungo and Sunil Bhand. Fluorimetric immunoassay for Multianalysis of Aflatoxins. Journal of Analytical Methods in Chemistry. Volume 2013, Article ID 584964, 8.