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Product datasheet for DM1001

Aflatoxin (AFM1+AFB1) Rat Monoclonal Antibody [Clone ID: 1E6]

Product data:

Product Type:	Primary Antibodies
Clone Name:	1E6
Applications:	ELISA, LF
Recommended Dilution:	**ELISA:** Reactive to Aflatoxin M1 (AFM1) and Aflatoxin B1 (AFB1). **Lateral Flow:** 5ng of AFM1 can be detected as competitive conjugate in lateral flow test.
Host:	Rat
Isotype:	IgG2b
Clonality:	Monoclonal
Immunogen:	Winstar rats were immunized with Aflatoxin M1-BSA conjugate
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 the above 4 monoclonals to AFM1-BSA-125I and the inhibition degree corresponded to the amounts of AFM1 used.
Formulation:	0.01M PBS, pH 7.2 State: Purified State: Lyophilized purified IgG fraction
Reconstitution Method:	Restore in double distilled water to a concentration of 1.0 mg/ml.
Concentration:	1.0 mg/ml (after reconstitution)
Purification:	Affinity Chromatography on Protein G
Conjugation:	Unconjugated
Storage:	Store the antibody in aliquots at -20°C after reconstitution. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.

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Background:

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.