3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone 800-325-5832 • (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

ProductInformation

Monoclonal Anti-Zearalenone
Clone ZER-70
Mouse Ascites Fluid

Product Number **Z 1751**

Product Description

Monoclonal Anti-Zearalenone (mouse IgE isotype) is derived from the ZER-70 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with Zearalenone-KLH conjugate.

Monoclonal Anti-Zearalenone (clone ZER-70) shows high activity with zearalenone, and recognizes also the metabolites zearalanone, α and β zearalenol, α and β zearalanol. No cross reaction is observed with Aflatoxin B1, Diacetoxyscirpenol (DAS), T-2 Toxin, or with KLH by indirect or competitive ELISA.

Zearalenone and its derivatives (zearalanone, α and β-zearalanols, α and β-zearalenols) are low molecular weight secondary metabolites produced by several species of the genus *Fusarium*. This naturally occurring fungal toxin (mycotoxins) was first isolated from the metabolites of *F. graminearum* (*Gibberella zeae*) as an estrogenic mycotoxin. It represents a major source of contamination of agricultural products to which humans and animals can be exposed to by consumption of contaminated goods. When fed to animals, the compound causes hyperestrogenism, lowering of blood cholesterol, enlargement of the uterus, and infertility. Many grains and foodstuffs, including corn, peanuts, tree nuts, cottonseed, cereal crops, beans, cassava, milo, sorghum, copra, rice, dried fish, and beer, can be found to be contaminated with zearalenone as a result of natural invasion by the molds before and during harvest, or because of improper storage. Therefore exposure to zearalenone can occur either directly, by eating contaminated grains, or indirectly via animal tissues (meat) or animal products (milk). A suitable analytical method for the detection and quantification of this toxin must be available for effective food and feed safety monitoring programs.

Sensitive, specific, and accurate methods of analysis which apply monoclonal antibodies have been developed, including enzyme immunoassays, competitive enzyme immunoassays and modified competitive enzyme immunoassays.[2-4,6] Monoclonal antibody which is reactive against zearalenone and its derivatives found in food and human body fluids is a substantive tool for monitoring the toxin.

Monoclonal Anti-Zearalenone is a homogenous population of antibody molecules which may be used for the detection and quantitation of zearalenone and its derivatives using competitive assays.

Reagent

The product is provided as ascites fluid with 0.1% sodium azide as a preservative.

Precautions and Disclaimer

Due to the sodium azide content a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

Storage/Stability

For extended storage freeze in working aliquots. For continuous use, store at 0-5 °C. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

Product Profile

The antibody titer was determined by competitive ELISA using Zearalenone-BSA (2 µg/ml) coated on microtiter plate and Zearalenone standards in the range of 0.031 - 4.0 µg/ml.

In order to obtain best results and sensitivity for lower zearalenone concentrations, it is recommended that each individual user determine optimal working dilutions by titration assay.

References

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