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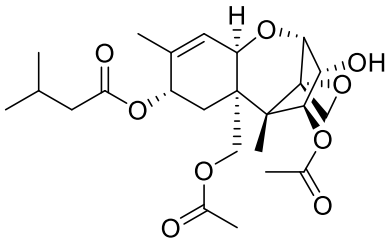
PRODUCT DATA SHEET

# T2 toxin

Code No.: **BIA-T1933**

Pack sizes: **0.25 mg, 1 mg**



Synonyms : Fusariotoxin T 2, Insariotoxin, Mycotoxin T 2, NSC 138780, T 2, T 2 Toxin, T 2 mycotoxin, T-2 Lienomycin, Toxin T 2

## Specifications

| | | |
|---|---|---|
| CAS # | : | **21259-20-1** |
| Molecular Formula | : | **$C_{24}H_{34}O_9$** |
| Molecular Weight | : | **466.5** |
| Source | : | ***Fusarium tricinctum*** |
| Appearance | : | **White solid** |
| Purity | : | **>95% by HPLC** |
| Long Term Storage | : | **-20°C** |
| Solubility | : | **Soluble in methanol or DMSO.** |

## Application Notes

T2 toxin is a Type A trichothecene mycotoxin found grains infected with Fusarium sp. causing toxic effects in livestock, particularly poultry. T2 toxin possesses an unusual 12,13-epoxytrichothecene-9-ene ring structure that is responsible for its toxicity. T2 toxin is cytotoxic to Vero cells in vitro causing induction of lipid peroxidation, inhibiting protein synthesis and causing DNA fragmentation and caspase-3-dependent apoptosis. In neuroblastoma cells, T2 toxin inhibits the Nrf2/HO-1 pathway leading to the generation of reactive oxygen species and mitochondrial dysfuntion. T2 toxin has a broad toxicological profile, having nephrotoxic, immunosuppressive and teratogenic effects.

## References


1. T-2 toxin: incidence and toxicity in poultry. Sokolović M. et al. Arh Hig Rada Toksikol. 2008, 59, 43.
2. The structure of T-2 toxin. Gilardi R et al. Acta Cryst. 1990, C46, 645.
3. Cytotoxicity and related effects of T-2 toxin on cultured Vero cells. Bouaziz C. et al. Toxicon. 2006, 48, 343.
4. T-2 toxin-induced toxicity in neuroblastoma-2a cells involves the generation of reactive oxygen, mitochondrial dysfunction and inhibition of Nrf2/HO-1 pathway. Zhang X et al. Food Chem Toxicol. 2018, 114, 88.
5. The nephrotoxicity of T-2 toxin in mice caused by oxidative stress-mediated apoptosis is related to Nrf2 pathway. Zhang X. et al. Food Chem Toxicol. 2021, 149, 112027.


For in vitro laboratory use only. Not for human or animal use.

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