

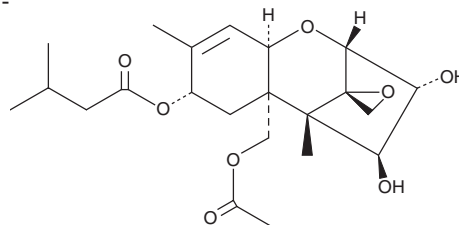
# PRODUCT INFORMATION



## HT-2 Toxin

Item No. 20431

**CAS Registry No.:** 26934-87-2  
**Formal Name:** 12,13-epoxy-trichothec-9-ene-3 $\alpha$ ,4 $\beta$ ,8 $\alpha$ ,15-tetrol, 15-acetate 8-(3-methylbutanoate)  
**Synonym:** NSC 278571  
**MF:** C<sub>22</sub>H<sub>32</sub>O<sub>8</sub>  
**FW:** 424.5  
**Purity:**  $\geq$ 98%  
**Supplied as:** A powder  
**Storage:** -20°C  
**Stability:**  $\geq$ 2 years  
**Special Conditions:** Avoid direct light



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

HT-2 Toxin is supplied as a powder. A stock solution may be made by dissolving the HT-2 Toxin in the solvent of choice, which should be purged with an inert gas. HT-2 Toxin is soluble in ethanol and DMSO. HT-2 Toxin is also soluble in the organic solvent dichloromethane at a concentration of approximately 5 mg/ml.

### Description

HT-2 toxin is a type A trichothecene mycotoxin and an active, deacetylated metabolite of the trichothecene mycotoxin T-2 toxin (Item No. 11444).<sup>1,2</sup> Like T-2 toxin, HT-2 toxin inhibits protein synthesis and cell proliferation in plants.<sup>2</sup> HT-2 toxin also reduces viability of HepG2, A549, HEp-2, Caco-2, A-204, U937, Jurkat, and RPMI-8226 cancer cells with IC<sub>50</sub> values ranging from 3.1 to 23 ng/ml and human umbilical vein endothelial cells (HUVECs) with an IC<sub>50</sub> value of 56.4 ng/ml.<sup>1</sup> It induces oxidative stress, DNA damage, and autophagy in, as well as halts the development of, cultured mouse embryos when used at a concentration of 10 nM.<sup>3</sup> HT-2 toxin has been found in cereal grains and food products.<sup>4,5</sup>

### References

1. Nielsen, C., Casteel, M., Didier, A., *et al.* Trichothecene-induced cytotoxicity on human cell lines. *Mycotoxin Res.* **25(2)**, 77-84 (2009).
2. Nathanail, A.V., Varga, E., Meng-Reiterer, J., *et al.* Metabolism of the fusarium mycotoxins T-2 toxin and HT-2 toxin in wheat. *J. Agric. Food Chem.* **63(35)**, 7862-7872 (2015).
3. Zhang, L., Li, L., Xu, J., *et al.* HT-2 toxin exposure induces mitochondria dysfunction and DNA damage during mouse early embryo development. *Reprod. Toxicol.* **85**, 104-109 (2019).
4. Langseth, W. and Rundberget, T. The occurrence of HT-2 toxin and other trichothecenes in Norwegian cereals. *Mycopathologia* **147(3)**, 157-165 (1999).
5. Al-Taher, F., Cappozzo, J., Zweigenbaum, J., *et al.* Detection and quantitation of mycotoxins in infant cereals in the U.S. market by LC-MS/MS using a stable isotope dilution assay. *Food Control* **72(Part A)**, 27-35 (2017).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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