



## Product Information

Product ID D1759

CAS No. 51481-10-8

**Chemical Name**

Synonym Vomitoxin

Formula  $C_{15}H_{20}O_6$

Formula Wt. 296.32

Melting Point 151-153 °C

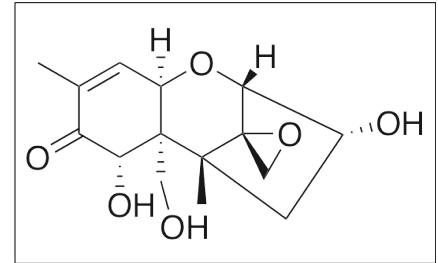
Purity ≥98%, TLC

Solubility Soluble in acetonitrile, methanol and ethyl acetate, slightly soluble in water.

Store Temp 4 °C

Ship Temp Ambient

**Description** Deoxynivalenol is a trichothecene mycotoxin initially produced by species of *Fusarium* that is found in cereals and other products of wheat or similar grains. Deoxynivalenol exhibits immunomodulatory, cytotoxic, and pro-inflammatory activities. In vivo, deoxynivalenol increases the formation of pores in the intestinal epithelial barrier of the jejunum, increases the number of CD16+ cells, and downregulates expression of syndeca, fibulin 6, and BM-40. In vitro, this toxin activates p38 MAPK and p53 to induce activation of caspases 3, 8, and 9, resulting in apoptosis; it also induces rRNA cleavage, inhibiting ribosomal translation. In other cellular models, deoxynivalenol upregulates expression of IL-1 $\beta$ , IL-6, TNF- $\alpha$ , COX-2, and mPGES-1.



**Bulk quantities available upon request**

Product ID	Size
D1759	1 mg
D1759	5 mg

**References** Ovando-Martínez M, Ozsisli B, Anderson J, et al. Analysis of deoxynivalenol and deoxynivalenol-3-glucoside in hard red spring wheat inoculated with *Fusarium graminearum*. *Toxins (Basel)*. 2013 Dec 17;5(12):2522-32. PMID: 24351715.

Nossol C, Diesing AK, Kahlert S, et al. Deoxynivalenol affects the composition of the basement membrane proteins and influences en route the migration of CD16(+) cells into the intestinal epithelium. *Mycotoxin Res*. 2013 Nov;29(4):245-54. PMID: 23949948.

He K, Zhou HR, Pestka JJ. Targets and intracellular signaling mechanisms for deoxynivalenol-induced ribosomal RNA cleavage. *Toxicol Sci*. 2012 Jun;127(2):382-90. PMID: 22491426.

Girardet C, Bonnet MS, Jdir R, et al. Central inflammation and sickness-like behavior induced by the food contaminant deoxynivalenol: a PGE2-independent mechanism. *Toxicol Sci*. 2011 Nov;124(1):179-91. PMID: 21873375.

**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.