



LKT Laboratories, Inc.

## Nivalenol

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### Product Information

**Product ID** N3584

**CAS No.** 23282-20-4

**Chemical Name** (1S,2R,3S,7R,9R,10R,11S,12S)-3,10,11-trihydroxy-2-(hydroxymethyl)-1,5-dimethylspiro[8-oxatricyclo[7.2.1.0<sup>2,7</sup>]dodec-5-ene-12,2'-oxirane]-4-one

**Synonym**

**Formula** C<sub>15</sub>H<sub>20</sub>O<sub>7</sub>

**Formula Wt.** 312.32

**Melting Point** 127-130°C

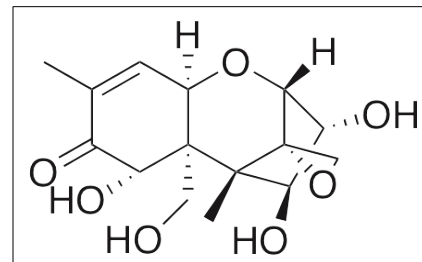
**Purity** ≥98%

**Solubility** DMSO, Methanol, dichloromethane. Slightly soluble in water.

**Store Temp** -20°C

**Ship Temp** Ambient

**Description** Nivalenol is a *Fusarium* type B trichothecene mycotoxin. Nivalenol is cytotoxic to leukocytes, inhibiting cell proliferation, increasing IL-8 secretion, and decreasing MCP-1 secretion in an NF-κB-dependent manner. In macrophages and Jurkat T cells, nivalenol increases cytochrome c release and degradation of Bcl-2, stimulating caspase 3-mediated apoptosis. Additionally, nivalenol induces the breakdown of polyribosomes and inhibits polypeptide chain initiation in eukaryotes.



### Pricing and Availability

**Bulk quantities available upon request**

| Product ID | Size   | List Price |
|------------|--------|------------|
| N3584      | 0.5 mg | \$90.20    |
| N3584      | 1 mg   | \$170.40   |
| N3584      | 5 mg   | \$613.20   |

**References** Alassane-Kpembi I, Kolf-Clauw M, Gauthier T, et al. New insights into mycotoxin mixtures: the toxicity of low doses of Type B trichothecenes on intestinal epithelial cells is synergistic. *Toxicol Appl Pharmacol.* 2013 Oct 1;272(1):191-8. PMID: 23735874.

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Nagashima H, Kushiro M, Nakagawa H. Nuclear factor-κB inhibitors alleviate nivalenol-induced cytotoxicity in HL60 cells. *Environ Toxicol Pharmacol.* 2011 Jan;31(1):258-61. PMID: 21787693.

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Nasri T, Bosch RR, Voorde St, et al. Differential induction of apoptosis by type A and B trichothecenes in Jurkat T-lymphocytes. *Toxicol In Vitro.* 2006 Sep;20(6):832-40. PMID: 16472964.

Cundliffe E, Cannon M, Davies J. Mechanism of inhibition of eukaryotic protein synthesis by trichothecene fungal toxins. *Proc Natl Acad Sci U S A.* 1974 Jan;71(1):30-4. PMID: 4521056.

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