



LKT Laboratories, Inc.

Nivalenol

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Product Information

Product ID N3584

CAS No. 23282-20-4

Chemical Name

Synonym

Formula $C_{15}H_{20}O_7$

Formula Wt. 312.32

Melting Point 127-130°C

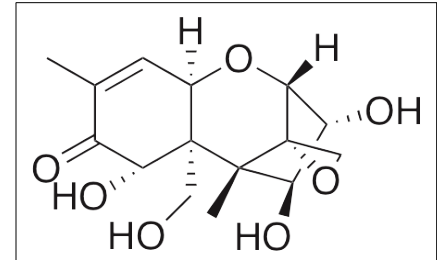
Purity $\geq 99\%$, TLC

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- κ B-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.



Bulk quantities available upon request

Product ID	Size
N3584	1 mg
N3584	5 mg

References Alassane-Kpembé 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.

Wu W, Flannery BM, Sugita-Konishi Y, et al. Comparison of murine anorectic responses to the 8-ketotrichothecenes 3-acetyldeoxynivalenol, 15-acetyldeoxynivalenol, fusarenon X and nivalenol. *Food Chem Toxicol.* 2012 Jun;50(6):2056-61. PMID: 22465835.

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

Marzocco S, Russo R, Bianco G, et al. Pro-apoptotic effects of nivalenol and deoxynivalenol trichothecenes in J774A.1 murine macrophages. *Toxicol Lett.* 2009 Aug 25;189(1):21-6. PMID: 19410639.

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.