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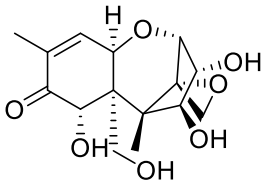
PRODUCT DATA SHEET

Nivalenol

Code No.: **BIA-N1920**

Pack sizes: **0.1 mg, 0.5 mg**



Synonyms : NSC 269143

Specifications

CAS #	:	**23282-20-4**
Molecular Formula	:	**$C_{15}H_{20}O_7$**
Molecular Weight	:	**312.32**
Source	:	***Fusarium* sp.**
Appearance	:	**White solid**
Purity	:	**>95% by HPLC**
Long Term Storage	:	**-20°C**
Solubility	:	**Soluble in methanol or DMSO**

Application Notes

Nivalenol is a trichothecene mycotoxin produced by various Fusarium sp. infecting grains. Nivalenol inhibits protein synthesis in H-HeLa cells, causing rapid and almost quantitative breakdown of polyribosomes. Nivalenol induces apoptosis mediated by caspase-3 and is associated with a cell cycle blocking in G0/G1 phase. Nivalenol demonstrates time-dependent inhibition followed by stimulation of interleukin (IL)-2, IL-4 and IL-5 in concanavalin A-treated CD4+ T-cells.

References

1. Toxicological research on substances from fusarium nivale III: The structure of nivalenol and its monoacetate. Tatsuno T. et al. Tetrahedron Lett. 1969, 10, 2823.
2. Mechanism of inhibition of eukaryotic protein synthesis by trichothecene fungal toxins. Cundliffe E. et al. Proc Nat Acad Sci. 1974, 71, 30.
3. Pro-apoptotic effects of nivalenol and deoxynivalenol trichothecenes in J774A.1 murine macrophages. Marzocco S. et al. Toxicology Lett. 2009, 189, 21.
4. Effects of trichothecene structure on cytokine secretion and gene expression in murine CD4+ T-cells. Ouyang Y.L. et al. Toxicol. 1995, 104, 187.
5. Effects of trichothecene mycotoxins on eukaryotic cells: A review. Rocha O. et al. Food Add Contam. 2005, 22, 369.

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