LKT Laboratories, Inc.

Diacetoxyscirpenol

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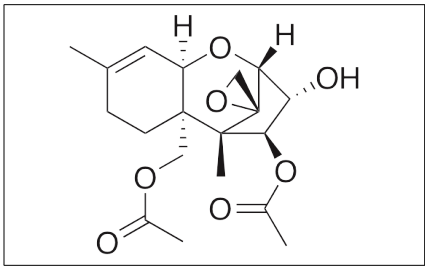
Product Information

Product ID D3200
CAS No. 2270-40-8
Chemical Name [(1S,2R,7R,9R,10R,11S,12S)-11-acetyloxy-10-hydroxy-1,5-dimethylspiro[8-oxatricyclo[7.2.1.02,7]dodec-5-ene-12,2'-oxirane]-2-yl]methyl acetate
Synonym Anguidin, Anguidine



Formula $C_{19}H_{26}O_7$
Formula Wt. 366.41
Melting Point 160-164°C
Purity ≥98%
Solubility Insoluble in water. Soluble in methanol (10 mg/mL), and acetone.

Pricing and Availability

Bulk quanitites available upon request

Product ID	Size	List Price
D3200	1 mg	$76.30
D3200	5 mg	$321.20
D3200	10 mg	$562.50

Store Temp 4°C
Ship Temp Ambient

Description Diacetoxyscirpenol (DAS) is a type A trichothecene mycotoxin initially produced by species of *Fusarium*. DAS primarily exhibits immunosuppressive and, potentially, anticancer activities; it is cytotoxic to most cell types and tissues in vivo. In Jurkat T cells, DAS initiates activation of caspases 3, 8, and 9, degradation of poly(ADP)-ribosomal polymerase (PARP), release of mitochondrial cytochrome c, as well as downregulation of Bcl-2, cdk4, and cyclin B1; together, this results in apoptosis and cell death. In other cellular models, DAS inhibits the killing action of phagocytic cells such as macrophages, decreasing generation of superoxide anions and altering lysozyme capabilities.

References

Jun DY, Kim JS, Park HS, et al. Cytotoxicity of diacetoxyscirpenol is associated with apoptosis by activation of caspase-8 and interruption of cell cycle progression by down-regulation of cdk4 and cyclin B1 in human Jurkat T cells. Toxicol Appl Pharmacol. 2007 Jul 15;222(2):190-201. PMID: 17559898.

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.

Ayral AM, Dubech N, Le Bars J, et al. In vitro effect of diacetoxyscirpenol and deoxynivalenol on microbicidal activity of murine peritoneal macrophages. Mycopathologia. 1992 Nov;120(2):121-7. PMID: 1336129.

Coppock RW, Gelberg HB, Hoffmann WE, et al. The acute toxicopathy of intravenous diacetoxyscirpenol (anguidine) administration in swine. Fundam Appl Toxicol. 1985 Dec;5(6 Pt 1):1034-49. PMID: 4092867.