



LKT Laboratories, Inc.

Citreoviridin A

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Product Information

Product ID C3576

CAS No. 25425-12-1

Chemical Name 4-Methoxy-5-methyl-6-(7-methyl-8-(tetrahydro-3,4-dihydroxy-2,4,5-trimethyl-2-furyl)-1,3,5,7-octatetraenyl)-2H-pyran-2-one

Synonym Citreoviridin

Formula C₂₃H₃₀O₆

Formula Wt. 402.48

Melting Point 110° C

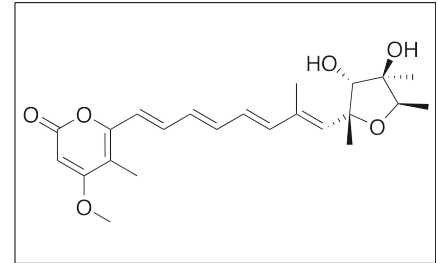
Purity ≥95%

Solubility Insoluble in water. Soluble in ethanol, chloroform, dichloromethane, and DMSO (10 mg/mL).

Store Temp 4° C

Ship Temp Ambient

Description Citreoviridin A is a mycotoxin found in cereal and bread grains; it exhibits pro-oxidative, anticancer chemotherapeutic, antibacterial, antifungal, and antiviral activities. In vitro, citreoviridin A increases ROS levels and decreases glutathione, inducing oxidative stress, destabilizing the lysosome and mitochondria and causing DNA damage. Citreoviridin A inhibits the F1 subunit of F1F0 ATP synthase, inhibiting cell proliferation in a lung cancer xenograft model. Citreoviridin also increases phosphorylation of eIF2α, inducing the unfolded protein response and the inhibition of cell growth. In other cellular models, this compound increases TNF-α-induced cellular adhesion to monocytes, increases nuclear translocation of NF-κB, and increases expression of ICAM-1, VCAM-1, E-selectin, and MCP-1. Citreoviridin inhibits cellular growth in species of *Bacillus* and *Candida* and also inhibits replication of HIV-1.



Bulk quantities available upon request

| Product ID | Size |
|------------|------|
| C3576 | 1 mg |
| C3576 | 5 mg |

References Bai Y, Jiang LP, Liu XF, et al. The role of oxidative stress in citreoviridin-induced DNA damage in human liver-derived HepG2 cells. *Environ Toxicol.* 2013 Dec 6. [Epub ahead of print]. PMID: 24318808.

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Hou H, Zhou R, Jia Q, et al. Citreoviridin enhances tumor necrosis factor-α-induced adhesion of human umbilical vein endothelial cells. *Toxicol Ind Health.* 2013 Mar 22. PMID: 23524880.

Chang HY, Huang HC, Huang TC, et al. Ectopic ATP synthase blockade suppresses lung adenocarcinoma growth by activating the unfolded protein response. *Cancer Res.* 2012 Sep 15;72(18):4696-706. PMID: 22822083.

Vieta I, Savarino A, Papa G, et al. In vitro inhibitory activity of citreoviridin against HIV-1 and an HIV-associated opportunist: *Candida albicans*. *J Chemother.* 1996 Oct;8(5):351-7. PMID: 8957714.

Sayood SF, Suh H, Wilcox CS, et al. Effect of citreoviridin and isocitreoviridin on beef heart mitochondrial ATPase. *Arch Biochem Biophys.* 1989 May 1;270(2):714-21. PMID: 2523213.

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