

# PRODUCT INFORMATION

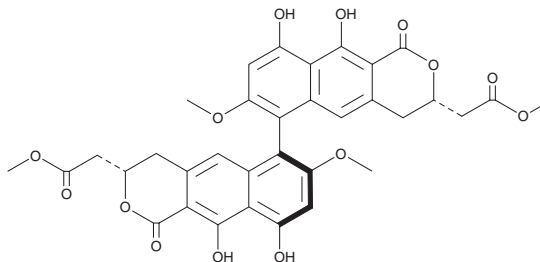


## (-)-Viriditoxin

Item No. 26601

**CAS Registry No.:** 1381782-08-6  
**Formal Name:** (3S,3'S,6R)-3,3',4,4'-tetrahydro-9,9',10,10'-tetrahydroxy-7,7'-dimethoxy-1,1'-dioxo-[6,6'-bi-1H-naphtho[2,3-c]pyran]-3,3'-diacetic acid, 3,3'-dimethyl ester

**MF:** C<sub>34</sub>H<sub>30</sub>O<sub>14</sub>  
**FW:** 662.6  
**Purity:** ≥98%  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

(-)-Viriditoxin is supplied as a solid. A stock solution may be made by dissolving the (-)-viriditoxin in the solvent of choice, which should be purged with an inert gas. (-)-Viriditoxin is soluble in organic solvents such as ethanol and DMSO.

### Description

(-)-Viriditoxin is a mycotoxin originally isolated from *A. viridinutans* that has antibacterial and antiproliferative activity.<sup>1-4</sup> It is active against methicillin-sensitive and -resistant *S. aureus* (MSSA and MRSA, respectively), tetracycline-sensitive and -resistant *Staphylococcus*, vancomycin-sensitive and -resistant *Enterococcus*, and penicillin-sensitive and -resistant *S. pneumoniae* (MICs = 2-32 µg/ml).<sup>2</sup> (-)-Viriditoxin is also active against fish pathogens, including *S. iniae* and *S. parauberis* (MICs = 0.16-0.21 µg/ml).<sup>3</sup> It inhibits polymerization and the GTPase activity of *E. coli* FtsZ, a tubulin-like GTPase involved in bacterial cell division (IC<sub>50</sub>s = 8.2 and 7 µg/ml, respectively).<sup>2</sup> (-)-Viriditoxin inhibits proliferation of human DU145, LNCaP, and PC3 prostate cancer cells (IC<sub>50</sub>s = 5.36, 0.63, and 7.6 µM, respectively).<sup>4</sup> It is also toxic to mice (LD<sub>50</sub> = 2.8 mg/kg, i.p.).<sup>5</sup>

### References

1. Weisleder, D. and Lillehoj, E.B. Structure of viriditoxin, a toxic metabolite of *Aspergillus viridi-nutans*. *Tetrahedron Lett.* **48**, 4705-4706 (1971).
2. Wang, J., Galgoci, A., Kodali, S., et al. Discovery of a small molecule that inhibits cell division by blocking FtsZ, a novel therapeutic target of antibiotics. *J. Biol. Chem.* **278(45)**, 44424-44428 (2003).
3. Noh, T.H., Sen, L., Hong, J., et al. Antibacterial activities of viriditoxin congeners and synthetic analogues against fish pathogens. *Bioorg. Med. Chem. Lett.* **27(22)**, 4970-4974 (2017).
4. Kundu, S., Kim, T.H., Yoon, J.H., et al. Viriditoxin regulates apoptosis and autophagy via mitotic catastrophe and microtubule formation in human prostate cancer cells. *Int. J. Oncol.* **45(6)**, 2331-2340 (2014).
5. Wong, D.T. and Hamill, R.L. Viriditoxin induces swelling and ATPase by activation of calcium transport in liver mitochondria. *Biochem. Biophys. Res. Commun.* **71(1)**, 332-338 (1976).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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