

# PRODUCT INFORMATION



## Verruculogen

Item No. 11351

**CAS Registry No.:** 12771-72-1  
**Formal Name:** (5R,10S,10aR)-1,10,10a,14,14aS,15bS-hexahydro-10,10a-dihydroxy-7-methoxy-2,2-dimethyl-5-(2-methyl-1-propen-1-yl)-5H,12H-3,4-dioxo-5a,11a,15a-triazacyclooct[Im]indeno[5,6-b]fluorene-11,15(2H,13H)-dione

**Synonyms:** NA 209A, TR 1

**MF:** C<sub>27</sub>H<sub>33</sub>N<sub>3</sub>O<sub>7</sub>

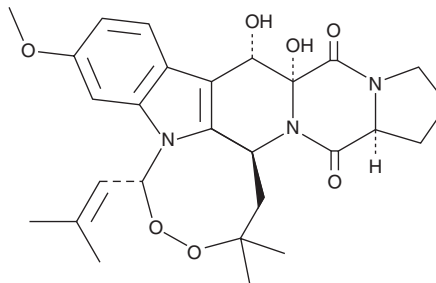
**FW:** 511.6

**Purity:** ≥95%

**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

Verruculogen is supplied as a solid. A stock solution may be made by dissolving the verruculogen in the solvent of choice, which should be purged with an inert gas. Verruculogen is soluble in organic solvents such as ethanol, methanol, DMSO, and dimethyl formamide.

### Description

Verruculogen is a tremorgenic mycotoxin isolated from species of *Penicillium*, *Aspergillus*, and other fungi.<sup>1,2</sup> It selectively inhibits the activation of large-conductance calcium-activated potassium channels (K<sub>Ca</sub>1.1/BK) potassium channels by charybdotoxin with a K<sub>1/2</sub> value of 170 nM.<sup>3</sup> Verruculogen also promotes the release of excitatory neurotransmitters when injected directly into the brain of rats and, at high doses, arrests mouse mammary carcinoma cells in M phase of the cell cycle (MIC = 12.2 μM).<sup>4,5</sup>

### References

1. Cole, R.J., Kirksey, J.W., Moore, J.H., et al. Tremorgenic toxin from *Penicillium veruculosum*. *Appl. Microbiol.* **24**(2), 248-250 (1972).
2. Abad, A., Fernjndez-Molina, J.V., Bikandi, J., et al. What makes *Aspergillus fumigatus* a successful pathogen? Genes and molecules involved in invasive aspergillosis. *Rev. Iberoam. Micol.* **27**(4), 155-182 (2010).
3. Knaus, H.-G., McManus, O.B., Lee, S.H., et al. Tremorgenic indole alkaloids potently inhibit smooth muscle high-conductance calcium-activated potassium channels. *Biochemistry* **33**(19), 5819-5828 (1994).
4. Peterson, D.W., Bradford, H.F., and Mantle, P.G. Actions of a tremorgenic mycotoxin on amino acid transmitter release *in vivo*. *Biochem. Pharmacol.* **31**(17), 2807-2810 (1982).
5. Cui, C.B., Kakeya, H., Okada, G., et al. Novel mammalian cell cycle inhibitors, tryprostatins A, B and other diketopiperazines produced by *Aspergillus fumigatus*. I. Taxonomy, fermentation, isolation and biological properties. *J. Antibiot. (Tokyo)* **49**(6), 527-533 (1996).

#### 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.

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