

Product Name: Verruculogen

Product Number: V019

CAS Number: 12771-72-1

Molecular Formula: $C_{27}H_{33}N_3O_7$

Molecular Weight: 511.6

Appearance: White solid

Storage Conditions: -20°C

Description: Verruculogen is a tremorgenic mycotoxin, first isolated from *Penicillium verruculosum* in 1972. The structure was resolved as an indole alkaloid in 1974. Verruculogen is produced by several species of *Penicillium* and *Aspergillus* and its presence is a useful taxonomic phenotypic marker. The tremorgenic action of verruculogen is associated with increases in spontaneous glutamate and aspartate release, decreases in GABA levels and, at toxic doses, an increase in the number and decrease in the affinity of DHP receptors in rat cortex. In in vitro guinea pig ileum preparations, verruculogen causes an increase in contractile responses due to electrical field stimulation, attributed to enhancement of acetylcholine from presynaptic nerve terminals.

Verruculogen is soluble in ethanol, methanol, DMF and DMSO.

Mechanism of Action: Verruculogen also inhibits Ca^{2+} -activated K^{+} channels, and is a cell cycle inhibitor blocking division at the M phase.

References:

Tremorgenic toxin from *Penicillium verruculosum*. Cole R.J., et al. Appl. Microbiol. 1972, 24, 248.

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Actions of tremorgenic fungal toxins on neurotransmitter release. Norris P.J. et al. , J. Neurochem. 1980, 34, 33.

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In vitro effects of tremorgenic mycotoxins. Selala M.I. et al. , J. Nat. Prod. 1991, 54, 207.

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