

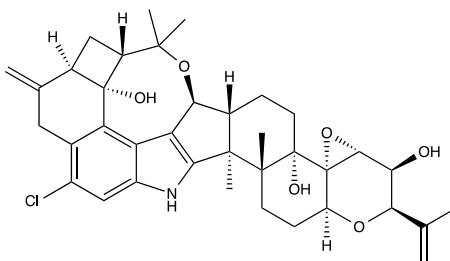
Catalog # 10-2099

Penitrem A

CAS# 12627-35-9

Tremortin A; NSC354845

Lot # X101406



Fungal mycotoxin. Selective, irreversible blocker of the smooth muscle high conductance Ca^{2+} -activated K^+ (BK, $\text{K}_{\text{Ca}1.1}$) channel (100% block at 10 nM).¹ Displays brain neurotoxicity in rats along with dose-dependent convulsions and death.² An important tool for studying the role of BK channels in vascular function which is effective in cellular, tissue and *in vivo* experiments.³ Inhibits BK channels in inside-out and cell-attached patches, whereas iberiotoxin (considered the gold standard BK channel blocker) does not.³ May be used to partially ablate Purkinje cells in immature rat cerebellum providing a model for neural stem cell transplantation studies.⁴ CAUTION: Potent Toxin. Take proper precautions to prevent ingestion, inhalation and skin contact.

- 1) Knaus *et al.* (1994), *Tremorgenic Indole Alkaloids Potently Inhibit Smooth Muscle High-Conductance Calcium-Activated Potassium Channels*; *Biochemistry*, **33** 5819
- 2) Breton *et al.* (1998), *Brain neurotoxicity of Penitrem A: electrophysiological, behavioral and histopathological study*; *Toxicol.* **36** 645
- 3) Asano *et al.* (2012), *Penitrem A as a tool for understanding the role of large conductance $\text{Ca}(2+)/\text{voltage-sensitive K}(+)$ channels in vascular function*; *J.Pharmacol.Exp.Ther.* **342** 453
- 4) Lu *et al.* (2008), *Toxin-produced Purkinje cell death: a model for neural stem cell transplantation studies*; *Brain Res.* **1207** 207

PHYSICAL DATA

Molecular Weight:	634.21
Molecular Formula:	$\text{C}_{37}\text{H}_{44}\text{ClNO}_6$
Purity:	>99% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (6 mg/mL)
Physical Description:	White solid
Storage and Stability:	Store as supplied at -20°C for up to 1 year from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 3 months.

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