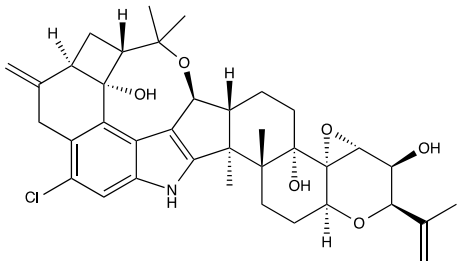
Catalog # 10-2099
Penitrem A
CAS# 12627-35-9
Tremortin A; NSC354845
Lot # X101405



Fungal mycotoxin. Selective, irreversible blocker of the smooth muscle high conductance Ca^{2+}-activated K^+ (BK, $K_{Ca}1.1$) 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*: Toxicon. **36** 645
3) Asano *et al.* (2012), *Penitrem A as a tool for understanding the role of large conductance Ca(2+)/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:	$C_{37}H_{44}ClNO_6$
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.

Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.

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