

Product Name: Penitrem A

Catalog No.: 4617

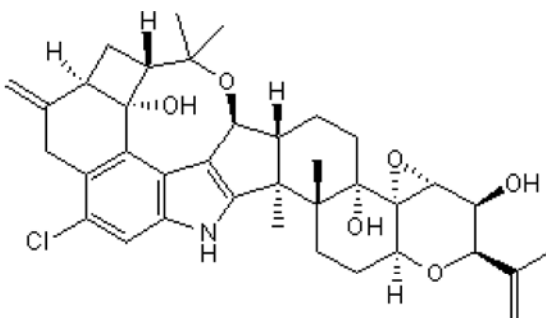
Batch No.: 5

CAS Number: 12627-35-9

IUPAC Name: 2*R*,3*S*,3*aR*,4*aS*,4*bS*,6*aR*,7*S*,7*dR*,8*R*,9*aR*,14*bS*,14*cR*,16*aS*)-12-chloro-3,3*a*,6*a*,8,9,9*a*,10,11,14,14*b*,14*c*,15,16,16*a*-tetradecahydro-14*b*,14*c*,17,17-tetramethyl-10-methylene-2-(1-methylethenyl)-7,8-(epoxymethano)-2*H*,6*H*-cyclobuta[5,6]benz[1,2-*e*]oxireno[4',4'*a*]-1-benzopyrano[5',6':6,7]indeno[1,2-*b*]indole-3,4*b*,7*d*(5*H*,7*H*)-triol

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₃₇ H ₄₄ ClNO ₆
Batch Molecular Weight:	634.2
Physical Appearance:	White solid
Solubility:	DMSO to 10 mM
Storage:	Store at -20°C
Batch Molecular Structure:	



2. ANALYTICAL DATA

HPLC:	Shows 98.4% purity
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Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Product Name:	Penitrem A	Catalog No.: 4617	5
CAS Number:	12627-35-9		
IUPAC Name:	2R,3S,3aR,4aS,4bS,6aR,7S,7dR,8R,9aR,14bS,14cR,16aS)-12-chloro-3,3a,6a,8,9,9a,10,11,14,14b,14c,15,16,16a-tetradecahydro-14b,14c,17,17-tetramethyl-10-methylene-2-(1-methylethenyl)-7,8-(epoxymethano)-2H,6H-cyclobuta[5,6]benz[1,2-e]oxireno[4',4'a]-1-benzopyrano[5',6':6,7]indeno[1,2-b]indole-3,4b,7d(5H,7H)-triol		

Description:

Penitrem A is a potent and selective blocker of BK_{Ca} (K_{Ca}1.1) channels (IC₅₀ values are 6.4 and 64.4 nM for BK_{Ca} channels containing α subunits only, and those containing α and β1 respectively). Displays no effect on native delayed rectifier K⁺ and K_{ATP} currents, or cloned K_v1.5 channels. Blocks BK_{Ca} channels in both inside-out and cell-attached patches. Shown to enhance smooth muscle contraction in vitro and increase total peripheral resistance in vivo.

Physical and Chemical Properties:

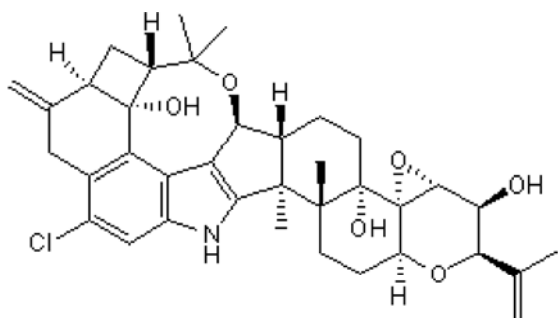
Batch Molecular Formula: C₃₇H₄₄ClNO₆

Batch Molecular Weight: 634.2

Physical Appearance: White solid

Minimum Purity: ≥95%

Batch Molecular Structure:



References:

Asano et al (2012) Penitrem A as a tool for understanding the role of large conductance Ca²⁺/voltage-sensitive K⁺ channels in vascular function. *J.Pharmacol.Exp.Ther.* **342** 453. PMID: 22580348.

Knaus et al (1994) Tremorgenic indole alkaloids potently inhibit smooth muscle high-conductance calcium-activated potassium channels. *Biochemistry* **33** 5819. PMID: 7514038.

Storage: Store at -20°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

DMSO to 10 mM

This product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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