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DATASHEET

Penitrem A

Product overview

Name	Penitrem A
Cat No	HB1057
Biological action	Blocker
Purity	>98%
Description	Potent, selective K_{Ca}1.1 channel blocker

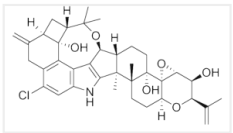
Biological Data

Biological description	Potent and selective K_{Ca}1.1 channel blocker (IC_{50} values are 6.4 and 64.4 nM for α-subunit and β1 subunits respectively). Displays little or no activity at CaCC, K_v1.5 and K_{ATP} channels. Neurotoxin produced by Penicillium genus. Displays enhancing smooth muscle contracting and tremorgenic properties.

Solubility & Handling

Storage instructions	-20°C
Solubility overview	Soluble in DMSO (10mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	2*R*,3*S*,3a*R*,4a*S*,4b*S*,6a*R*,7S,7d*R*,8*R*,9a*R*,14b*S*,14c*R*,16a*S*)-12-chloro-3,3a,6a,8,9,9a,10,11,14,14b,14c,15,16,16a- te trad ecahydr o-14b,14c,17,1 7-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-3,4b,7d(5*H*,7*H*)-triol
Molecular Weight	634.2
Chemical structure	
Molecular Formula	$C_{37}H_{44}ClNO_6$
CAS Number	12627-35-9
PubChem identifier	6610243
SMILES	O[C@H]9[C@@H]([C@](C)=C)O[C@@]([C@@]%108[C@@H]9O%10)([H])CC[C@]([C@@]8(O)C C7)(C)[C@@]([C@]7([H])[C@@H]4OC(C)(C)[C@]([H])5C6)(C)C3=C4C1=C(N3)C=C(Cl)C2=C1[C@ @]5(O)[C@@]6([H])C(C2)=C
InChiKey	JDUWHZOLEDOQSR-JKPSMKLGSA-N

References

Penitrem A as a tool for understanding the role of large conductance Ca(2+)/voltage-sensitive K(+) channels in vascular function.

Asano S *et al* (2012) J Pharmacol Exp Ther 342(2)
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Neurotoxicity of Penicillium crustosum secondary metabolites: tremorgenic activity of orally administered penitrem A and thomitrem A and E in mice.

Moldes-Anaya A *et al* (2012) Toxicon 60(8)
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In vitro and in vivo hepatic metabolism of the fungal neurotoxin penitrem A.

Moldes-Anaya A *et al* (2009) Drug Chem Toxicol 32(1)
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