

DATASHEET

Paxilline

Product overview

Name	Paxilline
Cat No	HB1056
Biological action	Inhibitor
Purity	>98%
Description	Potent, reversible, selective K_{Ca} channel inhibitor. Also SERCA inhibitor.

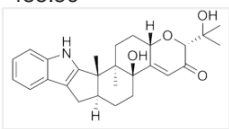
Biological Data

Biological description	Potent, reversible and selective K_{Ca} channel inhibitor ($K_i = 1.9$ nM at α -subunit). Also sarco/endoplasmic reticulum Ca^{2+} ATPase (SERCA) inhibitor ($IC_{50} = 5-50$ μ M). Indole alkaloid mycotoxin from <i>Penicillium paxilli</i> . Displays anticonvulsant properties.
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Solubility & Handling

Storage instructions	-20°C (desiccate)
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 <i>R</i> ,4 <i>bS</i> ,6 <i>aS</i> ,12 <i>bS</i> ,12 <i>cR</i> ,14 <i>aS</i>)-5,6,6 <i>a</i> , 7,12,12 <i>b</i> ,12 <i>c</i> ,13,14,14 <i>a</i> -Decahydro-4 <i>b</i> -hydroxy-2-(1-hydroxy-1-methylethyl)-12 <i>b</i> ,12 <i>c</i> -dimethyl-2 <i>H</i> -pyrano[2",3":5',6']benz[1',2':6,7]indeno[1,2- <i>b</i>]indol-3(4 <i>bH</i>)-one
Molecular Weight	435.56
Chemical structure	
Molecular Formula	$C_{27}H_{33}NO_4$
CAS Number	57186-25-1
PubChem identifier	105008
SMILES	<chem>[H][C@@]4([C@](C)3[C@]5(C)[C@@](C[C@]6([H])CC5)=CC([C@@H]([C@](O)(C)C)O6)=O)(O)C4)CC2=C3NC1=CC=CC=C12</chem>
InChiKey	ACNHBCIZLNNLRS-UBGQALKQSA-N

References

Glycine311, a determinant of paxilline block in BK channels: a novel bend in the BK S6 helix.

Zhou Y *et al* (2010) J Gen Physiol 135(5)

PubMedID [20421373](https://pubmed.ncbi.nlm.nih.gov/20421373/)

The mechanism of inhibition of the sarco/endoplasmic reticulum Ca^{2+} ATPase by paxilline.

Bilmen JG *et al* (2002) Arch Biochem Biophys 406(1)

PubMedID

12234490

Anticonvulsant effects of the BK-channel antagonist paxilline.

Sheehan JJ *et al* (2009) *Epilepsia* 50(4)

PubMedID

19054419

Paxilline inhibition of the alpha-subunit of the high-conductance calcium-activated potassium channel.

Sanchez M *et al* (1996) *Neuropharmacology* 35(7)

PubMedID

8938726
