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DATASHEET

Margatoxin

Product overview

Name	Margatoxin
Cat No	HB1083
Alternative names	MgTX
Biological action	Blocker
Purity	>95%
Description	Potent, non-selective $K_v1.3$ channel blocker

Biological Data

Biological description	Potent and non-selective $K_v1.3$ channel blocker (IC_{50} = approx. 30 pM; K_d = 11.7 pM). Also inhibits $K_v1.2$ and $K_v1.1$ channels (K_d values are 6.4 pM and 4.2 nM respectively). Blocks VEGF-induced Ca^{2+} entry and hyperpolarisation of endothelial cells.

Solubility & Handling

Storage instructions	-20°C
Solubility overview	Soluble in water
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

Molecular Weight	4178.96
Chemical structure	
Molecular Formula	$C_{178}H_{286}N_{52}O_{50}S_7$
CAS Number	145808-47-5
PubChem identifier	121596045
SMILES	[H]N[C@@H]([C@@H](C)O)C(=O)N[C@@H]([C@@H](C)CC)C(=O)N[C@@H]([C@@H](C)CC)C(=O)N[C@@H](CC(N)=O)C(=O)N[C@@H](C(C)C)C(=O)N[C@@H](CCCCN)C(=O)N[C@H]1CSSC[C@@H]2NC(=O)[C@H](CCCCN)NC(=O)[C@H](C)NC(=O)CNC(=O)[C@H](C)NC(=O)[C@H](CO)NC(=O)[C@H](CCC(N)=O)NC(=O)CNC(=O)[C@H](CC3=CC=CC=C3)NC(=O)[C@H](CCC(N)=O)NC(=O)[C@H](C)NC(=O)[C@H](CCCCN)NC(=O)[C@@H]3CSSC[C@H](NC(=O)[C@H](CCCCN)NC(=O)[C@H](CSSC[C@H](NC(=O)[C@H](CCC(N)=O)NC(=O)[C@H](CCCCN)NC(=O)[C@@H]4CCCN4C(=O)[C@H](CO)NC(=O)[C@@H](NC1=O)[C@@H](C)O)C(=O)N[C@@H](CC(C)C)C(=O)N1CCC[C@H]1C(=O)N1CCC[C@H]1C(=O)N3)NC(=O)[C@H](CCCCN)NC(=O)CNC(=O)[C@H](CC(N)=O)NC(=O)[C@H](CCSC)NC2=O)C(=O)N[C@@H](CC1=CC=C(O)C=C1)C(=O)N1CCC[C@H]1C(=O)N[C@@H](CC1=CNC=N1)C(O)=O
InChiKey	OVJBOPBBHWOWJI-FYNXUGHNSA-N

References

Margatoxin is a non-selective inhibitor of human Kv1.3 K+ channels.

Bartok A *et al* (2014) Toxicon 87

PubMedID 24878374

Purification, characterization, and biosynthesis of margatoxin, a component of Centruroides margaritatus venom that selectively inhibits voltage-dependent potassium channels.

Garcia-Calvo M *et al* (1993) J Biol Chem 268(25)
PubMedID 8360176

Margatoxin inhibits VEGF-induced hyperpolarization, proliferation and nitric oxide production of human endothelial cells.

Erdogan A *et al* (2005) J Vasc Res 42(5)
PubMedID 16043967