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DATASHEET

Ryanodine

Product overview

Name	Ryanodine
Cat No	HB1320
Biological action	Inhibitor
Purity	>98%
Description	Potent Ca^{2+} release inhibitor

Images



Biological Data

Biological description	Potent Ca^{2+} release inhibitor. Inhibits release from the cardiac and skeletal muscle sarcoplasmic reticulum (IC_{50} values are 2.8 and 10 nM respectively). Shows actions to slow arrhythmia development in heart failure.
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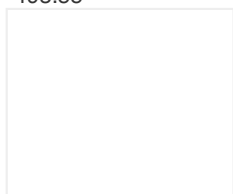
Solubility & Handling

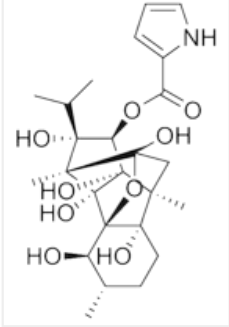
Storage instructions	-20°C (desiccate)
Solubility overview	Soluble in ethanol (10mM) and in DMSO (25mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	1 <i>H</i> -Pyrrole-2-carboxylic acid, (3 <i>S</i> ,4 <i>R</i> ,4 <i>aR</i> ,6 <i>S</i> ,7 <i>S</i> ,8 <i>R</i> ,8 <i>aS</i> ,8 <i>bR</i> ,9 <i>S</i> ,9 <i>aS</i>) -dodecahydro-4,6,7,8 <i>a</i> ,8 <i>b</i> ,9 <i>a</i> -hexahydroxy-3,6 <i>a</i> ,9-tri methyl-7-(1-methylethyl)-6,9-methanobenzo[1,2]pent aleno[1,6- <i>bc</i>]furan-8-yl ester
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Molecular Weight	493.55
Chemical structure	



Chemical name	1 <i>H</i> -Pyrrole-2-carboxylic acid, (3 <i>S</i> ,4 <i>R</i> ,4 <i>aR</i> ,6 <i>S</i> ,7 <i>S</i> ,8 <i>R</i> ,8 <i>aS</i> ,8 <i>bR</i> ,9 <i>S</i> ,9 <i>aS</i>) -dodecahydro-4,6,7,8 <i>a</i> ,8 <i>b</i> ,9 <i>a</i> -hexahydroxy-3,6 <i>a</i> ,9-tri methyl-7-(1-methylethyl)-6,9-methanobenzo[1,2]pent aleno[1,6- <i>bc</i>]furan-8-yl ester
	
Molecular Formula	C ₂₅ H ₃₅ NO ₉
CAS Number	15662-33-6
PubChem identifier	11317883
SMILES	<chem>CC(C)[C@@]6(O)C(OC(=O)c1cccn1)[C@]2(O)[C@@]5(O)[C@@]34O[C@@](O)(C[C@@]2(C)[C@@]4(O)CC[C@H](C)[C@H]3O)[C@]56C</chem>
Source	Extracted from <i>ryania speciosa</i>
InChi	InChI=1S/C25H35NO9/c1-12(2)22(31)17(34-16(28)14-7-6-10-26-14)23(32)18(4)11-21(30)19(22,5)25(23,33)24(35-21)15(27)13(3)8-9-20(18,24)29/h6-7,10,12-13,15,17,26-27,29-33H,8-9,11H2,1-5H3/t13-,15+,17+,18-,19+,20-,21-,22+,23+,24+,25+/m0/s1
InChiKey	JJSYXNQGLHBRRK-SFEDZAPPSA-N

References

The pharmacology of ryanodine and related compounds.

Sutko JL *et al* (1997) Pharmacol Rev 49(1)

PubMedID [9085309](#)

Effects of sarcolemmal Ca(2+) entry, ryanodine function, and kinase inhibitors on a rabbit model of heart failure.

Kijitawornrat A *et al* (2010) Int Heart J 51(4)

PubMedID [20716847](#)

Ryanodine modification of RyR1 retrogradely affects L-type Ca(2+) channel gating in skeletal muscle.

Bannister RA *et al* (2009) J Muscle Res Cell Motil 30(5-6)

PubMedID [19802526](#)