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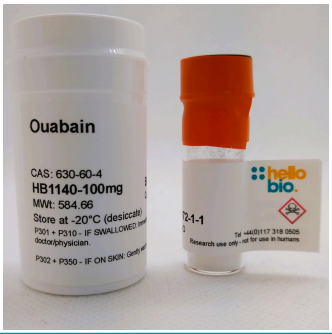
DATASHEET

Ouabain

Product overview

Name	Ouabain
Cat No	HB1140
Alternative names	g-strophanthin
Biological action	Inhibitor
Purity	>98%
Description	Selective Na^+ / K^+ ATPase inhibitor. Shows antiviral activity.

Images



Biological Data

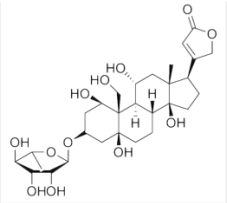
Biological description	Selective Na^+ / K^+ ATPase inhibitor. Thought to act as a proliferative agent; promotes cardiac and vascular myocyte cell growth. Shows positive inotropic, vasoconstrictive and hypertensive actions. Also shows antiviral activity (e.g. reported anti-MERS-CoV activity in Vero cells)

Solubility & Handling

Storage instructions	-20°C (desiccate)
Solubility overview	Soluble in water (10mM) and in DMSO (100mM)
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	3-[(6-Deoxy-α-L-mannopyranosyl)oxy]-1,5,11α,14,19-pentahydoxycard-20(22)-enolide
Molecular Weight	584.66
Chemical structure	



Molecular Formula	$C_{29}H_{44}O_{12}.8H_2O$
CAS Number	630-60-4
PubChem identifier	439501
SMILES	C[C@H]1[C@@H]([C@H]([C@H]([C@@H](O1)O[C@H]2C[C@H]([C@@]3([C@@H]4[C@@H](CC[C@@]3(C2)O)[C@]5(CC[C@@H]([C@]5(C[C@H]4O)C)C6=CC(=O)OC6)O)CO)O)O)O)O
InChi	InChI=1S/C29H44O12/c1-13-22(34)23(35)24(36)25(40-13)41-15-8-19(32)28(12-30)21-17(3-5-27(28,37)9-15)29(38)6-4-16(14-7-20(33)39-11-14)26(29,2)10-18(21)31/h7,13,15-19,21-25,30-32,34-38H,3-6,8-12H2,1-2H3/t13-,15-,16+,17+,18+,19+,21+,22-,23+,24+,25-,26+,27-,28
InChiKey	LPMXVESGRSUGHW-HBYQJFLCSA-N
MDL number	MFCD00149240
Appearance	White solid

References

Effect of m-calpain in PKCalpha-mediated proliferation of pulmonary artery smooth muscle cells by low dose of ouabain.

Shaikh S *et al* (2013) Indian J Biochem Biophys 50(5)
PubMedID 24772963

Increased constrictor tone induced by ouabain treatment in rats.

Pulgar VM *et al* (2013) J Cardiovasc Pharmacol 62(2)
PubMedID 23615157

Different roles of the cardiac Na+/Ca2+-exchanger in ouabain-induced inotropy, cell signaling, and hypertrophy.

Bai Y *et al* (2013) Am J Physiol Heart Circ Physiol 304(3)
PubMedID 23203972

Screening of FDA-approved drugs using a MERS-CoV clinical isolate from South Korea identifies potential therapeutic options for COVID-19

Ko et al (2020) bioRxiv Preprint