

# DATASHEET

## Digoxin

### Product overview

<b>Name</b>	Digoxin
<b>Cat No</b>	HB1138
<b>Biological action</b>	Inhibitor
<b>Purity</b>	>98%
<b>Description</b>	Na <sup>+</sup> / K <sup>+</sup> ATPase $\alpha$ subunit inhibitor. Antiviral.

### Biological Data

<b>Biological description</b>	Na <sup>+</sup> / K <sup>+</sup> ATPase $\alpha$ subunit inhibitor (IC <sub>50</sub> = 2.69 $\mu$ M) which increases regulator of G protein signaling 2 (RGS2) protein levels (EC <sub>50</sub> = 83 nM). Exhibits little or no effect on RGS4. Also potent HIV-1 replication inhibitor and exhibits anti-MERS-CoV activity in Vero cells in vitro.
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### Solubility & Handling

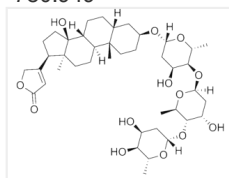
<b>Storage instructions</b>	Room temperature
<b>Solubility overview</b>	Soluble in DMSO (100mM)
<b>Important</b>	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

### Chemical Data

<b>Chemical name</b>	4-[(3S,5R,8R,9S,10S,12R,13S,14S)-3-[(2S,4S,5R,6R)-5-[(2S,4S,5R,6R)-5-[(2S,4S,5R,6R)-4,5-dihydroxy-6-methyl-oxan-2-yl]oxy-4-hydroxy-6-methyl-oxan-2-yl]oxy-4-hydroxy-6-methyl-oxan-2-yl]oxy-12,14-dihydroxy-10,13-dimethyl-1,2,3,4,5,6,7,8,9,11,12,15,16,17-tetradecahydrocyclopenta[a]phenanthrene n-17-yl]-5H-furan-2-one
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<b>Molecular Weight</b>	780.949
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**Chemical structure**



<b>Molecular Formula</b>	C <sub>41</sub> H <sub>64</sub> O <sub>14</sub>
<b>CAS Number</b>	20830-75-5
<b>PubChem identifier</b>	2724385
<b>SMILES</b>	<chem>O=C1OC/C(=C/1)[C@H]2CC[C@@]8(O)[C@]2(C)[C@H](O)C[C@H]7[C@H]8CC[C@H]6[C@]7(C)CC[C@H](O)[C@@H]5O[C@H](C)[C@@H](O)[C@H]4O[C@@H]([C@@H](O)[C@@H]3O[C@@H]([C@@H](O)C3)C)[C@@H](O)C4)C[C@@H](O)C5)C6</chem>
<b>InChi</b>	InChI=1S/C <sub>41</sub> H <sub>64</sub> O <sub>14</sub> /c1-19-36(47)28(42)15-34(50-19)54-38-21(3)52-35(17-30(38)44)55-37-20(2)51-33(16-29(37)43)53-24-8-10-39(4)23(13-24)6-7-26-27(39)14-31(45)40(5)25(9-11-41(26,40)48)22-12-32(46)49-18-22/h12,19-21,23-31,33-38,42-45,47-48H,6-11,13-18H2,1-5H3/t
<b>InChiKey</b>	LTMHDMANZUZIPE-PUGKRICDSA-N
<b>MDL number</b>	MFCD00003674

### References

### **Digoxin in the management of cardiovascular disorders.**

Gheorghide M *et al* (2004) *Circulation* 109(24)

**PubMedID** [15210613](#)

### **Cardiotonic steroids stabilize regulator of G protein signaling 2 protein levels.**

Sjögren B *et al* (2012) *Mol Pharmacol* 82(3)

**PubMedID** [22695717](#)

### **Digoxin suppresses HIV-1 replication by altering viral RNA processing.**

Wong RW *et al* (2013) *PLoS Pathog* 9(3)

**PubMedID** [23555254](#)

### **Inhibition of Na,K-ATPase by oleandrin and oleandrigenin, and their detection by digoxin immunoassays.**

Jortani SA *et al* (1996) *Clin Chem* 42(10)

**PubMedID** [8855150](#)

### **Drug repurposing for new, efficient, broad spectrum antivirals**

Pacheco *et al* (2019) *Virus Res.* 264

**PubMedID** [30794895](#)

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