

Product Name: Digoxin

Catalog No.: 4583

Batch No.: 3

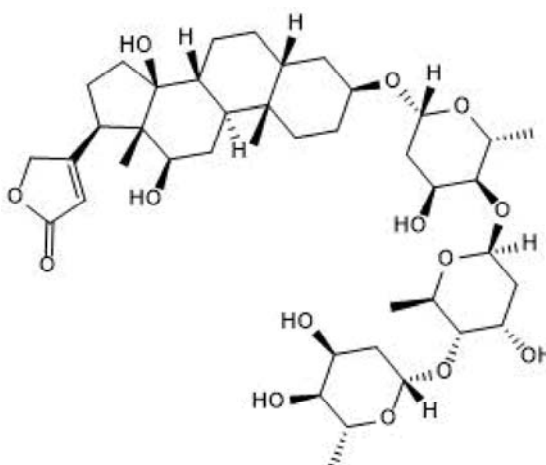
CAS Number: 20830-75-5

EC Number: 244-068-1

IUPAC Name: 4-[(3*S*,5*R*,8*R*,9*S*,10*S*,12*R*,13*S*,14*S*)-3-[(2*S*,4*S*,5*R*,6*R*)-5-[(2*S*,4*S*,5*R*,6*R*)-5-[(2*S*,4*S*,5*R*,6*R*)-4,5-Dihydroxy-6-methyloxan-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*]phenanthren-17-yl]-5*H*-furan-2-one

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₄₁ H ₆₄ O ₁₄
Batch Molecular Weight:	780.94
Physical Appearance:	White solid
Solubility:	DMSO to 100 mM
Storage:	Store at RT
Batch Molecular Structure:	



2. ANALYTICAL DATA

HPLC:	Shows 98.2% purity
¹H NMR:	consistent with structure
Mass Spectrum:	Consistent with structure
Optical Rotation:	[α] _D = +12.3 (Concentration = 2, Solvent = Pyridine)
Microanalysis:	
	Carbon Hydrogen Nitrogen
	Theoretical 63.06 8.26
	Found 63.12 8.37

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Inhibits membrane-bound α -subunits of the Na⁺/K⁺ ATPase pump in myocytes. Increases RGS2 protein levels in primary vascular smooth muscle cells through an Na⁺/K⁺ ATPase pump-dependent mechanism. Also exhibits anti-MERS-CoV activity in Vero cells in vitro (IC₅₀ = 0.17 μ M).

Physical and Chemical Properties:

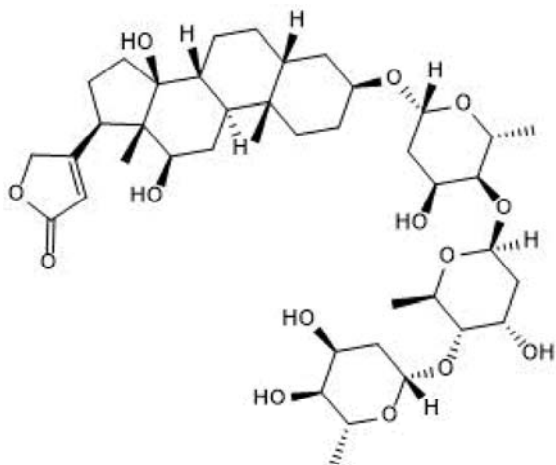
Batch Molecular Formula: C₄₁H₆₄O₁₄

Batch Molecular Weight: 780.94

Physical Appearance: White solid

Minimum Purity: \geq 98%

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Ko et al (2020) Screening of FDA-approved drugs using a MERS-CoV clinical isolate from South Korea identifies potential therapeutic options for COVID-19. *BioRxiv* - Paper not yet peer reviewed.

Sjogren et al (2012) Cardiotonic steroids stabilize regulator of g protein signaling 2 protein levels. *Mol.Pharmacol.* **82** 500. PMID: 22695717.

Buckalew (2005) Endogenous digitalis-like factors. An historical overview. *Front.Biosci.* **10** 2325. PMID: 15970498.

Gheorghiadu et al (2004) Digoxin in the management of cardiovascular disorders. *Circulation* **109** 2959. PMID: 15210613.

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