

**Product Name:** Ouabain

**Catalog No.:** 1076

**Batch No.:** 11

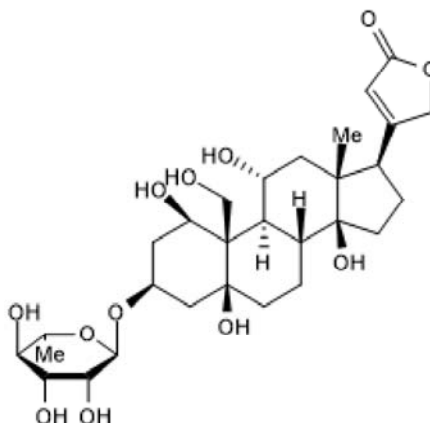
CAS Number: 630-60-4

EC Number: 211-139-3

IUPAC Name: 3-[(6-Deoxy- $\alpha$ -L-mannopyranosyl)oxy]-1,5,11 $\alpha$ ,14,19-pentahydroxycard-20(22)-enolide

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>29</sub>H<sub>44</sub>O<sub>12</sub>·8H<sub>2</sub>O  
**Batch Molecular Weight:** 728.78  
**Physical Appearance:** White solid  
**Solubility:** water to 10 mM  
DMSO to 100 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 99.0% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Water content by Karl Fischer:** 19.6%

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

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IUPAC Name: 3-[(6-Deoxy- $\alpha$ -L-mannopyranosyl)oxy]-1,5,11 $\alpha$ ,14,19-pentahydroxycard-20(22)-enolide

**Description:**

Selective Na<sup>+</sup>, K<sup>+</sup>-ATPase inhibitor.

**Physical and Chemical Properties:**

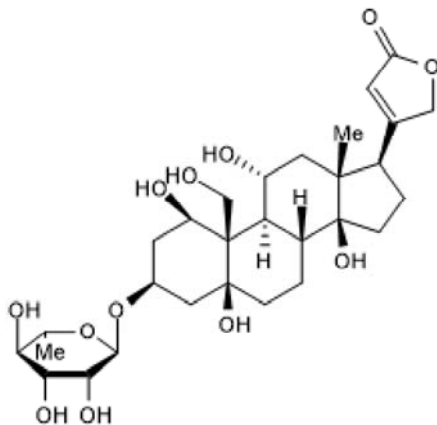
Batch Molecular Formula: C<sub>29</sub>H<sub>44</sub>O<sub>12</sub>·8H<sub>2</sub>O

Batch Molecular Weight: 728.78

Physical Appearance: White solid

**Minimum Purity:**  $\geq$ 95%

**Batch Molecular Structure:**



**Storage:** Store at -20°C

**Solubility & Usage Info:**

water to 10 mM

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:**

**Croyle *et al*** (1997) Extensive random mutagenesis analysis of the Na/K<sup>+</sup> ATPase alpha subunit identifies known and previously unidentified amino acid residues that alter ouabain sensitivity-implications for ouabain binding. *Eur.J.Biochem.* **248** 488. PMID: 9346307.

**Hosoi *et al*** (1997) Isoform-specific up-regulation by ouabain of Na<sup>+</sup>, K<sup>+</sup>-ATPase in cultured rat astrocytes. *J.Neurochem.* **69** 2189. PMID: 9349566.

**Marjorie *et al*** (1997) Ouabain improves cardiac function in vivo in rats with heart failure after chronic but not acute treatment. *Naunyn Schmiedebergs Arch.Pharmacol.* **356** 203. PMID: 9272726.

Merck Index **12** 7031.

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