

Product Name: Ouabain

Catalog No.: 1076

Batch No.: 12

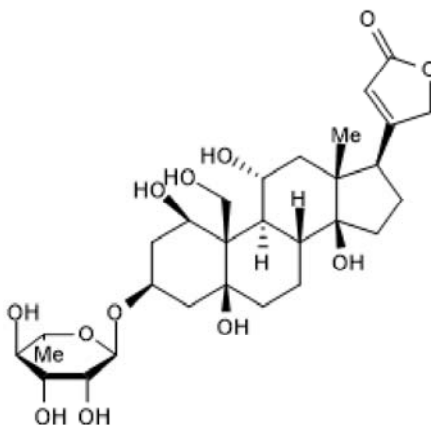
CAS Number: 630-60-4

EC Number: 211-139-3

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

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₉H₄₄O₁₂·8H₂O
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 98.6% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Water content by Karl Fischer: 19.8%

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

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Description:

Ouabain is a selective Na⁺, K⁺-ATPase inhibitor. Cardiotonic agent. Also exhibits anti-MERS-CoV activity in Vero cells in vitro (IC₅₀ = 0.08 μ M).

Physical and Chemical Properties:

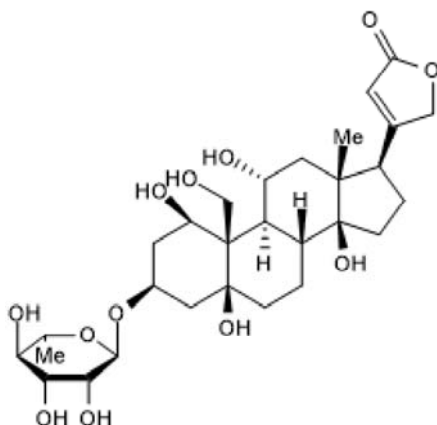
Batch Molecular Formula: C₂₉H₄₄O₁₂·8H₂O

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:

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.

Croyle et al (1997) Extensive random mutagenesis analysis of the Na/K⁺ 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⁺, K⁺-ATPase in cultured rat astrocytes. *J.Neurochem.* **69** 2189. PMID: 9349566.

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