

Product Name: Rostafuroxin

Catalog No.: 5315

Batch No.: 1

CAS Number: 156722-18-8

IUPAC Name: (3 β ,5 β ,14 β)-21,23-Epoxy-24-norchola-20,22-diene-3,14,17-triol

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₃H₃₄O₄.2 $\frac{3}{4}$ H₂O

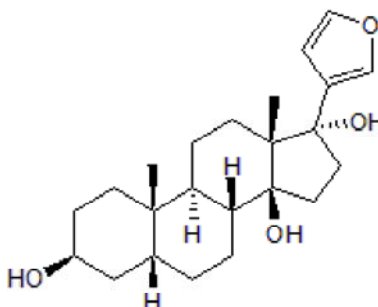
Batch Molecular Weight: 424.05

Physical Appearance: White solid

Solubility: DMSO to 100 mM
ethanol to 100 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.2% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	65.14	9.39	
Found	65.42	9.4	

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

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Description:

Na⁺/K⁺ ATPase modulator. Inhibits the Normalizes renal Na⁺/K⁺ ATPase pump function in mutant adducin- and endogenous ouabain-dependent forms of hypertension. Reduces blood pressure in Milan hypertensive rats. Controls mania-like behaviors in Myshkin mice having a Na⁺/K⁺ ATPase α3 subunit mutation. Antagonizes the effects of Ouabain (Cat.No. 1076) on myogenic tone and Ca²⁺ signaling in rat hippocampal neurons.

Physical and Chemical Properties:

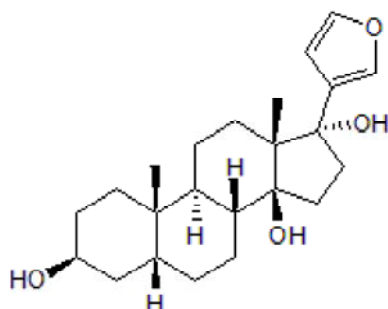
Batch Molecular Formula: C₂₃H₃₄O₄·2½H₂O

Batch Molecular Weight: 424.05

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



References:

Song *et al* (2014) Ouabain-digoxin antagonism in rat arteries and neurones. *J.Physiol.* **592** 941. PMID: 24344167.

Kirshenbaum *et al* (2011) Mania-like behavior induced by genetic dysfunction of the neuron-specific Na⁺,K⁺-ATPase α3 sodium pump. *Proc.Natl.Acad.Sci.U.S.A.* **108** 18144. PMID: 22025725.

Ferrari *et al* (2010) Rostafuroxin: an ouabain-inhibitor counteracting specific forms of hypertension. *Biochim Biophys Acta.* **1802** 1254. PMID: 20083196.

Ferrari (2006) Rostafuroxin: an ouabain antagonist that corrects renal and vascular Na⁺-K⁺- ATPase alterations in ouabain and adducin-dependent hypertension. *Am.J.Physiol.Regul.Integr.Comp.Physiol.* **290** 529. PMID: 16467500.

Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 100 mM
ethanol 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.

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