

Certificate of Analysis

Product Name: Ranolazine dihydrochloride

Catalog No.: 3118

Batch No.: 2

CAS Number: 95635-56-6

IUPAC Name: *N*-(2,6-Dimethylphenyl)-4-[2-hydroxy-3-(2-methoxyphenoxy)propyl]-1-piperazineacetamide dihydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{24}H_{33}N_3O_4 \cdot 2HCl \cdot \frac{1}{2}H_2O$

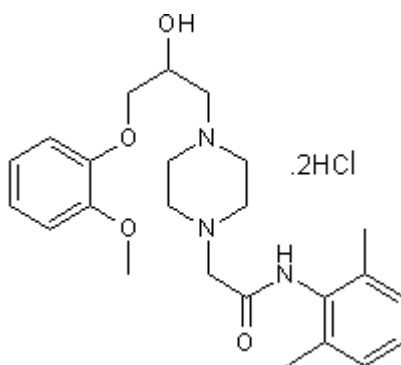
Batch Molecular Weight: 509.47

Physical Appearance: White solid

Solubility: water to 100 mM
DMSO to 100 mM

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.7% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	56.58	7.12	8.25
Found	56.3	7.13	8.16

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Description:

Antianginal agent with antiarrhythmic properties that acts as a partial fatty acid oxidation inhibitor. Activates pyruvate dehydrogenase in ischemic myocytes to promote glucose oxidation, switching substrate utilization from fatty acids to glucose. Also shown to inhibit late I_{Na} and I_{Kr} currents.

Physical and Chemical Properties:

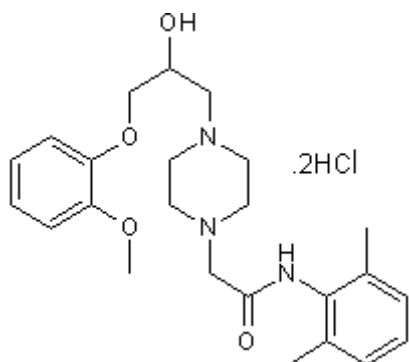
Batch Molecular Formula: C₂₄H₃₃N₃O₄.2HCl.½H₂O

Batch Molecular Weight: 509.47

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Desiccate at RT

Solubility & Usage Info:

water to 100 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:

Shryock and Belardinelli (2008) Inhibition of late sodium current to reduce electrical and mechanical dysfunction of ischaemic myocardium. *Br.J.Pharmacol.* **153** 1128. PMID: 18071302.

Wang et al (2008) Antitumor effects of (+/-)-*N*-(2,6-dimethyl-phenyl)-4[2-hydroxy-3-(2-methoxyphenoxy)propyl]-1-piperazine (ranolazine) in anesthetized rabbits. *J.Pharmacol.Exp.Ther.* **325** 875. PMID: 18322148.

Zacharowski et al (2001) Ranolazine, a partial fatty acid oxidation inhibitor, reduces myocardial infarct size and cardiac troponin T release in the rat. *Eur.J.Pharmacol.* **418** 105. PMID: 11334871.

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