

Certificate of Analysis

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Product Name: Alexidine dihydrochloride

Catalog No.: 3979

Batch No.: 2

CAS Number: 1715-30-6

EC Number: 216-994-6

IUPAC Name: *N,N'*-Bis(2-ethylhexyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediimidamide dihydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₆H₅₆N₁₀.2HCl

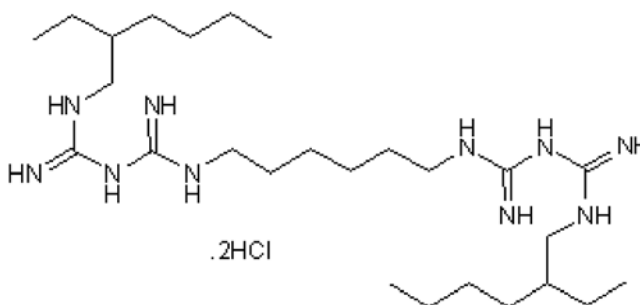
Batch Molecular Weight: 581.71

Physical Appearance: White solid

Solubility: DMSO to 100 mM
ethanol to 100 mM

Storage: Desiccate at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

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

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Description:

Selective inhibitor of protein tyrosine phosphatases localized to mitochondrion 1 (PTPMT1) (IC_{50} = 1.08 μ M in vitro). Stimulates increased insulin secretion by β -cells in rat pancreatic islets. Displays anticancer properties in FaDu cells. Also preserves functional hematopoietic stem cells ex vivo.

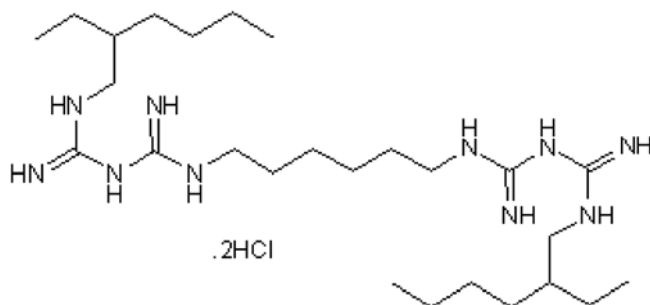
Physical and Chemical Properties:

Batch Molecular Formula: $C_{26}H_{56}N_{10} \cdot 2HCl$

Batch Molecular Weight: 581.71

Physical Appearance: White solid

Batch Molecular Structure:



Storage: Desiccate at -20°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.

References:

Liu *et al* (2015) Maintenance of mouse hematopoietic stem cells ex vivo by reprogramming cellular metabolism. *Blood* **125** 1562. PMID: 25593337.

Doughty-Shenton *et al* (2010) Pharmacological targeting of the mitochondrial phosphatase PTPMT1. *J.Pharmacol.Exp.Ther.* **333** 584. PMID: 20167843.

Yip *et al* (2006) Potential use of alexidine dihydrochloride as an apoptosis-promoting anticancer agent. *Mol.Cancer Ther.* **5** 2234. PMID: 16985057.

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