Certificate of Analysis

Product Name: **Concanamycin A** **Catalog No.: 2656** **Batch No.: 3**

CAS Number: 80890-47-7

IUPAC Name: (3*Z*,5*E*,7*R*,8*R*,9*S*,10*S*,11*R*,13*E*,15*E*,17*S*,18*R*)-18-[(1*S*,2*R*,3*S*)-3-[(2*R*,4*R*,5*S*,6*R*)-4-[[4-*O*-(Aminocarbonyl)-2,6-dideoxy-β-D-arabino-hexopyranosyl]oxy]tetrahydro-2-hydroxy-5-methyl-6-(1*E*)-1-propenyl-2*H*-pyran-2-yl]-2-hydroxy-1-methylbutyl]-9-ethyl-8,10-dihydroxy-3,17-dimethoxy-5,7,11,13-tetramethyloxacyclooctadeca-3,5,13,15-tetraen-2-one

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{46}H_{75}NO_{14}$

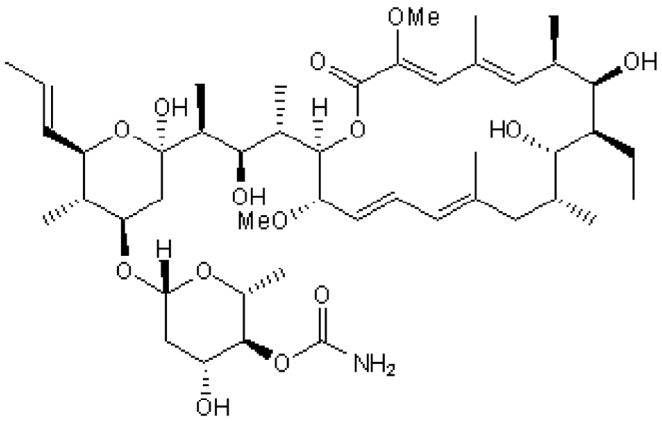
Batch Molecular Weight: 866.09

Physical Appearance: White solid

Solubility: Soluble in DMSO

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.9% purity

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Description:

Concanamycin A is a specific inhibitor of V-type (vacuolar) H^+-ATPase that displays > 2000-fold selectivity over other H^+-ATPases (IC_{50} values are 9.2, > 20000, > 20000 and > 20000 nM for yeast V-type, F-type, P-type H^+-ATPases and porcine P-type Na^+,K^+-ATPase respectively). Blocks cell surface expression of virus envelope glycoproteins without affecting synthesis and exhibits cytotoxicity in several cell lines.

Physical and Chemical Properties:

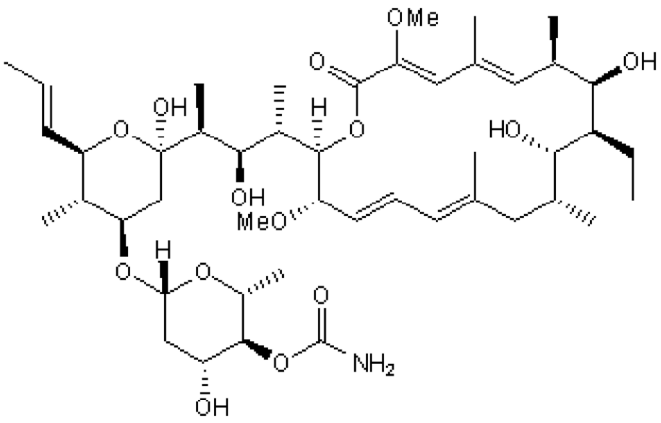
Batch Molecular Formula: $C_{46}H_{75}NO_{14}$

Batch Molecular Weight: 866.09

Physical Appearance: White solid

Minimum Purity: ≥90%

Batch Molecular Structure:



Storage: Store at -20°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

Soluble in DMSO

This product is supplied in lyophilized form. It may appear as a solid, gel or film and be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

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. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

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:

Hong *et al* (2006) Nitric oxide production by the vacuolar-type (H^+)-ATPase inhibitors bafilomycin A1 and concanamycin A and its possible role in apoptosis in RAW 264.7 cells. J.Pharmacol.Exp.Ther. ***319*** 672. PMID: 16895977.

Nishihara *et al* (1995) Specific inhibitors of vacuolar type H^+-ATPases induce apoptotic cell death. Biochem.Biophy.Res.Comm. ***212*** 255.

Muroi *et al* (1993) Folimycin (Concanamycin A), a specific inhibitor of V-ATPase, blocks intracellular translocation of the glycoprotein of vesicular stomatitus virus before arrival to the golgi apparatus. Cell Struct.Function. ***18*** 139.

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