Print Date: Jun 25th 2013

Certificate of Analysis

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Product Name: A23187, free acid **Catalog No.: 1234** **Batch No.: 5**

CAS Number: 52665-69-7 EC Number: 258-084-1

IUPAC Name: 5-(Methylamino)-2-[[2*R*,3*R*,6*S*,8*S*,9*R*,11*R*) -3,9,11-trimethyl-8-[(1*S*)-1-methyl-2-oxo-2-(1*H*-pyrrol-2-yl)-ethyl]-1,7-dioxaspiro[5.5]undec-2-yl]methyl]-4-benzoxazolecarboxylic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{29}H_{37}N_3O_6$

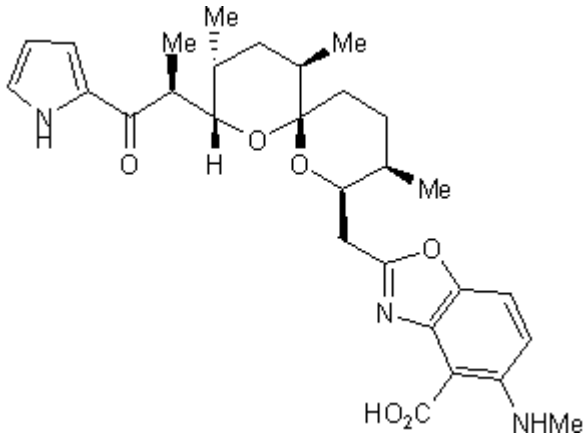
Batch Molecular Weight: 523.63

Physical Appearance: White solid

Solubility: ethanol to 10 mM with gentle warming
DMSO to 50 mM

Storage: Desiccate at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.6% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	66.52	7.12	8.02
Found	66.59	7.13	8.04

Product Information

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Description:

Calcium ionophore that induces Ca^{2+}-dependent cell death by increasing intracellular calcium concentration. Promotes intracelllular ROS generation and platelet particle formation (fragmentation) in vitro and in vivo. Can be used to induce autophagy in mammalian cells.

Physical and Chemical Properties:

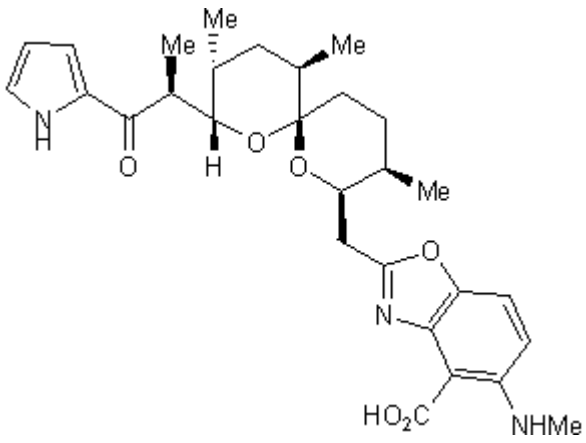
Batch Molecular Formula: $C_{29}H_{37}N_3O_6$

Batch Molecular Weight: 523.63

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Desiccate at +4°C

Solubility & Usage Info:

ethanol to 10 mM with gentle warming
DMSO to 50 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:

Kajitani *et al* (2007) Mechanism of A23187-induced apoptosis in HL-60 cells: dependency on mitochondrial permeability transition but not NADPH oxidase. Biosci.Biotechnol.Bichem. ***71*** 2701. PMID: 7535265.

Nardi *et al* (2007) Platelet particle formation by anti-GPIIIa49-66 Ab, Ca^{2+} ionophore A23187, and phorbol myristate acetate is induced by reactive oxygen species and inhibited by dexamethasone blockade of platelet phospholipase A_2, 12-lipoxygenase, and NADPH oxidase. Blood ***110*** 1989. PMID: 17545506.

Ding *et al* (2007) Differential effects of endoplasmic reticulum stress-induced autophagy on cell survival. J.Biol.Chem. ***282*** 4702. PMID: 17135238.

Sakanashi *et al* (2009) Zn^{2+}, derived from cell preparation, partly attenuates Ca^{2+}-dependent cell death induced by A23187, calcium ionophore, in rat thymocytes. Toxicol.In Vitro ***23*** 338. PMID: 19124067.