Certificate of Analysis

Product Name: **Calyculin A** **Catalog No.: 1336** **Batch No.: 10**

CAS Number: 101932-71-2

IUPAC Name: *N*-[(3*S*)-[4-(1*E*)-3-[(2*R*,3*R*,4*R*,7*S*,8*S*,9*R*)-2-[(1*S*,3*S*,4*S*,5*R*,7*E*,9*E*,11*E*,13*Z*)-14-Cyano-3,5-dihydroxy-1-methoxy-4,6,8,9,13-pentamethyl-7,9,11,13-tetradecatetraenyl]-9-hydroxy-4,4,8-trimethyl-3-(phosphonooxy)-1,6-dioxaspiro[4.5]dec-7-yl]-1-propenyl]-2-oxazoly]butyl]-4-deoxy-4-(dimethylamino)-5-*O*-methyl-L-ribonamide

1. PHYSICAL AND CHEMICAL PROPERTIES

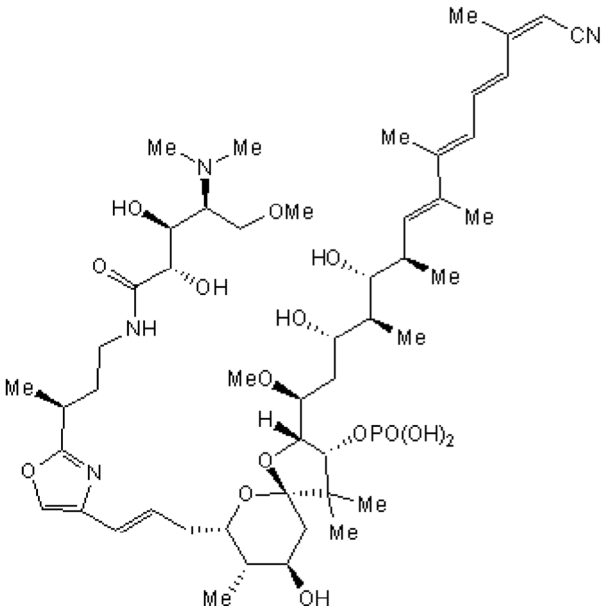
Batch Molecular Formula: $C_{50}H_{81}N_4O_{15}P$

Batch Molecular Weight: 1009.18

Physical Appearance: film

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 91.0% purity

Mass Spectrum: Consistent with structure

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Description:

Calyculin A is a potent and selective cell-permeable inhibitor of protein phosphatase 1 (IC_{50} = 0.3 - 0.7 nM) and protein phosphatase 2A (IC_{50} = 0.5 - 1 nM). Displays > 10,000,000-fold selectivity over PP2B and PP2C. Note: This product is typically prepared in DMSO.

Physical and Chemical Properties:

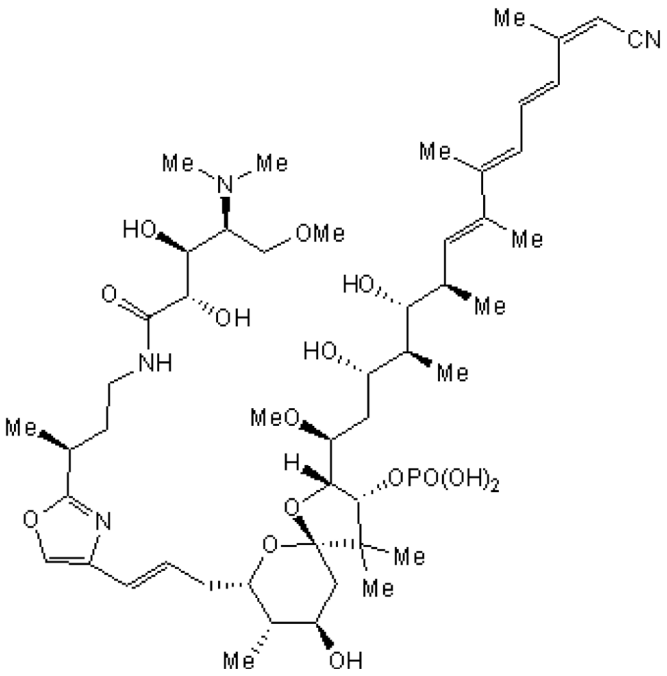
Batch Molecular Formula: $C_{50}H_{81}N_4O_{15}P$

Batch Molecular Weight: 1009.18

Physical Appearance: film

Minimum Purity: ≥90%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

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:

McCluskey *et al* (2002) Serine-threonine protein phosphatase inhibitors: development of therapeutic strategies. J.Med.Chem. ***45*** 1151. PMID: 11881984.

Favre *et al* (1997) Differential inhibition and posttranslational modification of protein phosphatase 1 and 2A in MCF7 cells treated with calyculin-A, okadaic acid, and tautomycin. J.Biol.Chem. ***272*** 13856. PMID: 9153244.

Lindval *et al* (1997) The binding mode of calyculin A to protein phosphatase-1. J.Biol.Chem. ***272*** 23312. PMID: 9287341.