

Product Name: Cyclosporin A

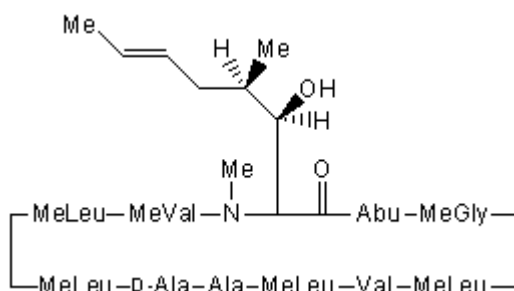
Catalog No.: 1101

Batch No.: 5

CAS Number: 59865-13-3

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{62}H_{111}N_{11}O_{12} \cdot \frac{3}{4}H_2O$
Batch Molecular Weight: 1216.14
Physical Appearance: White solid
Solubility: DMSO to 100 mM
 ethanol to 50 mM
Storage: Desiccate at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.7% purity

¹H NMR: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	61.23	9.32	12.67
Found	61.23	9.15	12.85

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Description:

Immunosuppressant; inhibits phosphatase activity of calcineurin ($IC_{50} = 5 \text{ nM}$). Also inhibits formation and opening of the mitochondrial permeability transition pore (MPTP).

Physical and Chemical Properties:

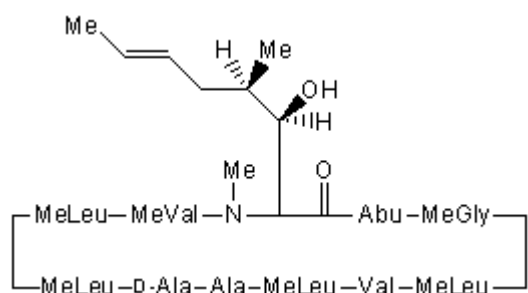
Batch Molecular Formula: $C_{62}H_{111}N_{11}O_{12} \cdot \frac{3}{4}H_2O$

Batch Molecular Weight: 1216.14

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Desiccate at -20°C

Solubility & Usage Info:

DMSO to 100 mM

ethanol 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 $45\text{-}60^{\circ}\text{C}$ 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:

Fruman et al (1992) Calcineurin phosphatase activity in T lymphocytes is inhibited by FK 506 and cyclosporin A. *Proc.Natl.Acad.Sci.U.S.A.* **89** 3686. PMID: 1373887.

Brookemeier and Pfeiffer (1995) Inhibition of the mitochondrial permeability transition pore by cyclosporin A during long time frame experiments: relationship between pore opening and the activity of mitochondrial phospholipases. *Biochemistry* **34** 16440. PMID: 8845372.

Nakata et al (1998) Evidence that cyclosporin A and dexamethasone inhibit allergic airway inflammation via suppression of interleukin-5 synthesis by T cells. *Br.J.Pharmacol.* **124** 1425. PMID: 9723954.

Yan et al (2009) Cyclosporin-A potently induces highly cardiogenic progenitors from embryonic stem cells. *BiochemBiophys.Res.Commun.* **379** 115. PMID: 19094963.

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