

Certificate of Analysis

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Product Name: Cyclosporin A

Catalog No.: 1101

Batch No.: 6

CAS Number: 59865-13-3

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₆₂H₁₁₁N₁₁O₁₂·½H₂O

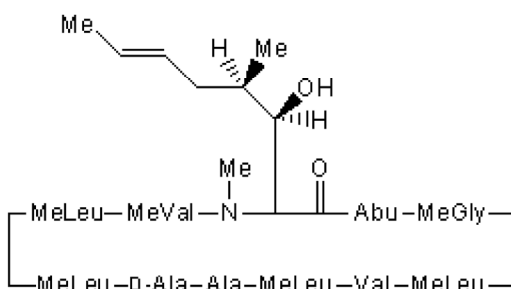
Batch Molecular Weight: 1211.64

Physical Appearance: White solid

Solubility: DMSO to 100 mM
ethanol to 50 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.4% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	61.46	9.32	12.72
Found	61.2	9.35	12.67

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

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CAS Number: 59865-13-3

Description:

Cyclosporin A is an immunosuppressant; simultaneously binds calcineurin and cyclophilin and inhibits phosphatase activity of calcineurin ($IC_{50} = 5 \text{ nM}$). Additionally inhibits formation and opening of the mitochondrial permeability transition pore (MPTP). Also inhibits coronavirus replication in vitro. Enhances lentiviral transduction of bone marrow-derived CD34⁺ cells and is additive with Prostaglandin E₂ (Cat. No. 2296).

Physical and Chemical Properties:

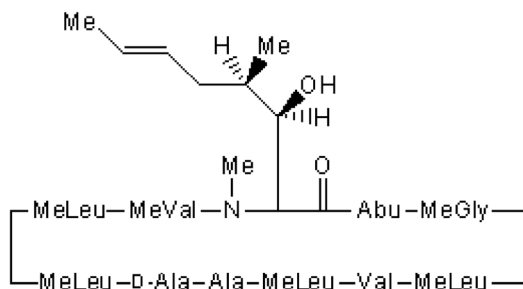
Batch Molecular Formula: C₆₂H₁₁₁N₁₁O₁₂·½H₂O

Batch Molecular Weight: 1211.64

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store 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 45-60°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:

Petrillo *et al* (2019) Assessing the impact of cyclosporin A on lentiviral transduction and preservation of human hematopoietic stem cells in clinically relevant *ex vivo* gene therapy settings. *Hum.Gene.Ther.* **30** 1133. PMID: 31037976 .

Carbajo-Lozoya *et al* (2014) Human coronavirus NL63 replication is cyclophilin A-dependent and inhibited by non-immunosuppressive cyclosporine A-derivatives including Alisporivir. *Virus Res.* **184** 44. PMID: 24566223.

de Wilde *et al* (2013) MERS-coronavirus replication induces severe *in vitro* cytopathology and is strongly inhibited by cyclosporin A or interferon-α treatment. *J.Gen.Virol.* **94** 1749. PMID: 23620378.

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