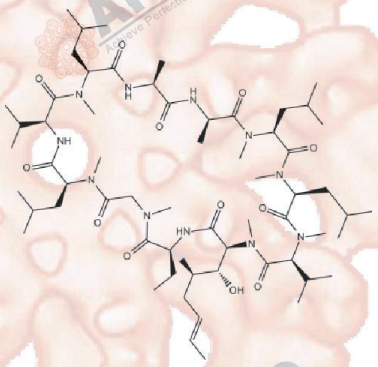
Product Data Sheet

# Cyclosporin A



**Cat. No.:** B1922
**CAS No.:** 59865-13-3
**Formula:** C62H111N11O12
**M.Wt:** 1202.61
**Synonyms:** Cyclosporine, Ciclosporin
**Target:**
**Pathway:**
**Storage:** Store at -20°C

## Solvent & Solubility

In Vitro

≥119.4 mg/mL in DMSO with ultrasonic; insoluble in H2O; ≥101.4 mg/mL in EtOH

Preparing Stock Solutions

| Concentration \ Mass / Solvent | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 0.8315 mL | 4.1576 mL | 8.3152 mL |
| 5 mM | 0.1663 mL | 0.8315 mL | 1.6630 mL |
| 10 mM | 0.0832 mL | 0.4158 mL | 0.8315 mL |

Please refer to the solubility information to select the appropriate solvent.

## Biological Activity

| | |
|---|---|
| Shortsummary | Immunosuppressive agent |
| $IC_{50}$ & Target | |

In Vitro

**Cell Viability Assay**

| | |
|---|---|
| Cell Line: | Jurkat T cells and A549 lung carcinoma cells |
| Preparation method: | The solubility of this compound in DMSO is >60.2 mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months. |
| Reacting conditions: | 1 μM, 24h |

| | | |
|---|---|---|
| | Applications: | Pretreatment of fresh T cells with CsA during primary TCR stimulation decreased their production of TGF-β1 during secondary stimulation. Higher concentrations of CsA (10 μM) promoted the release of preformed TGF-β1 by inducing apoptosis. |
| In Vivo | **Animal experiment** | |
| | Animal models: | Female retinal ischemia C57BL/6 mouse model |
| | Dosage form: | Intraperitoneal injection, 5 mg/kg per day |
| | Applications: | CsA significantly promoted RGC survival in ischemic retina. CsA treatment significantly decreased GFAP and CypD protein expression in ischemic retina at 12 h. CsA treatment decreased CypD immunoreactivity in the inner layer of ischemic retina. |
| | Other notes: | Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal. |

## Product Citations

1. Yang YL, Li J, et al. "Ginsenoside Rg5 increasescardiomyocyte resistance to ischemic injury through regulation of mitochondrialhexokinase-II and dynamin-related protein 1." Cell Death Dis. 2017 Feb23;8(2):e2625.PMID:28230856

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## References

[1]. Minguillón J, Morancho B, Kim S J, et al. Concentrations of cyclosporin A and FK506 that inhibit IL-2 induction in human T cells do not affect TGF-β1 biosynthesis, whereas higher doses of cyclosporin A trigger apoptosis and release of preformed TGF-β1[J]. Journal of leukocyte biology, 2005, 77(5): 748-758.

[2]. Kim S Y, Shim M S, Kim K Y, et al. Inhibition of cyclophilin D by cyclosporin A promotes retinal ganglion cell survival by preventing mitochondrial alteration in ischemic injury[J]. Cell death & disease, 2014, 5(3): e1105.

## Caution

**FOR RESEARCH PURPOSES ONLY.**

**NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

*Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.*

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