

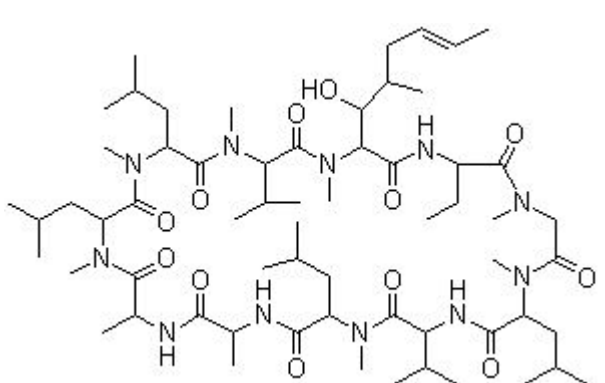


## Product Introduction

### Cyclosporin A

Cyclosporin A is an immunosuppressive agent, binds to the cyclophilin and then inhibits **calcineurin** with IC50 of 7 nM, widely used in organ transplantation to prevent rejection. Phase 4.

#### Technical Data:

<b>Molecular Weight (MW):</b>	1202.61	
<b>Formula:</b>	C <sub>62</sub> H <sub>111</sub> N <sub>11</sub> O <sub>12</sub>	
<b>Solubility (25°C)</b>	DMSO 100 mg/mL	
<b>* &lt;1 mg/ml means slightly soluble or insoluble:</b>	Water <1 mg/mL	
	Ethanol 100 mg/mL	
<b>Purity:</b>	>98%	
<b>Storage:</b>	3 years -20°C Powder 6 months -80°C in DMSO	
<b>CAS No.:</b>	59865-13-3	

#### Biological Activity

Cyclosporin A binds to the cyclophilin (immunophilin) in T cells<sup>[1]</sup>, forms a Cyclophilin-Cyclosporin A complex which binds to and inhibits calcineurin. <sup>[2]</sup> Cyclosporin A inhibits calcineurin with IC50 of 7 nM<sup>[3]</sup>, then blocks the nuclear translocation of NF-AT. <sup>[4]</sup> Cyclosporin A also affects mitochondria by preventing the MTP (mitochondrial permeability transition pore) from opening with an IC50 of 39 nM. <sup>[5]</sup> Cyclosporin A is an immunosuppressive agent that is effective following either parenteral or oral

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administration in mice, rat and guinea pigs. [6], is clinically used in organ transplantation to prevent rejection. [7]

## References

- [1] Handschumacher RE, et al. *Science*, 1984, 226(4674), 544-547.
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- [5] Nicolli A, et al. *J Biol Chem*, 1996, 271(4), 2185-2192.
- [6] Borel JF, et al. *Immunology*, 1977, 32(6), 1017-1025.
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