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## DATASHEET

Cyclosporin A

### Product overview

<b>Name</b>	Cyclosporin A
<b>Cat No</b>	HB0220
<b>Alternative names</b>	Cyclosporine; Antibiotic S 7481F1; Ciclosporin A; CSA; cyclosporine A
<b>Biological action</b>	Inhibitor
<b>Purity</b>	>99%
<b>Description</b>	Potent calcineurin inhibitor. Inhibits MPTP opening.

### Images



### Biological Data

**Biological description** Potent calcineurin inhibitor ( $IC_{50} = 5 \text{ nM}$ ) which inhibits mitochondrial permeability transition pore (MPTP) opening and also acts as a P-glycoprotein inhibitor.

Additionally, it increases AKT activation, displays immunosuppressive, tumor promoting and pro-angiogenic properties.

It also shows antiviral activity and inhibits the replication of diverse coronaviruses.

### Solubility & Handling

<b>Storage instructions</b>	-20°C (desiccate)
<b>Solubility overview</b>	Soluble in DMSO (100mM) or ethanol (50mM)
<b>Important</b>	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

### Chemical Data

<b>Molecular Weight</b>	1202.63
<b>Chemical structure</b>	
<b>Molecular Formula</b>	$C_{62}H_{111}N_{11}O_{12}$
<b>CAS Number</b>	59865-13-3

PubChem identifier	2909
SMILES	<chem>OC(C(CC=CC)C)C1C(=O)NC(C(=O)N(C)CC(N(C)C(C(C)C)C)C(NC(C(=O)N(C)C(C(C)C)C(NC(C)C(=O)NC(C)C(N(C)C(C(N(C)C(C(N(C)C(C(C)C)C(C)C)C(=O)N1C)=O)CC(C)C)=O)CC(C)C)=O)C(C)C)=O)CC</chem>
InChiKey	PMATZTZNYRCHOR-UHFFFAOYSA-N

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## References

### Cyclosporin A Promotes Tumor Angiogenesis in a Calcineurin-Independent Manner by Increasing Mitochondrial Reactive Oxygen Species.

Zhou AY *et al* (2014) Mol Cancer Res

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### The P-glycoprotein inhibitor cyclosporin A differentially influences behavioural and neurochemical responses to the antidepressant escitalopram.

O'Brien FE *et al* (2014) Behav Brain Res 261

PubMedID [24280122](#)

### Calcineurin phosphatase activity in T lymphocytes is inhibited by FK 506 and cyclosporin A.

Fruman DA *et al* (1992) Proc Natl Acad Sci U S A 89(9)

PubMedID [1373887](#)

### Immunosuppressive cyclosporin A activates AKT in keratinocytes through PTEN suppression: implications in skin carcinogenesis.

Han W *et al* (2010) J Biol Chem 285(15)

PubMedID [20154081](#)

### Cyclosporin A inhibits the replication of diverse coronaviruses

Hemert *et al* (2011) J Gen Virol. (11)

PubMedID [21752960](#)

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