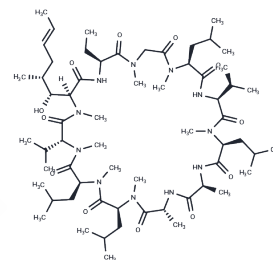


## Cyclosporin H

## Chemical Properties

CAS No. :	83602-39-5
Formula:	C <sub>62</sub> H <sub>111</sub> N <sub>11</sub> O <sub>12</sub>
Molecular Weight:	1202.61
Storage:	Keep away from moisture, Store at low temperature Powder: -20°C for 3 years   In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



## Biological Description

Description	Cyclosporin H (CsH), a specific inhibitor of FPR1, inhibited lung inflammation in the ALI models. CsH significantly attenuated MTDs or NFP-induced inflammatory lung injury and activation of MAPK and AKT pathways. Cyclosporin H is a viral transduction enhancer which increases lentiviral transduction up to 10-fold in human cord blood-derived hematopoietic stem and progenitor cells (HSPCs). When combined with Rapamycin or Prostaglandin E2 Cyclosporin H displays an additive effect. Cyclosporin H lacks immunosuppressant activity of Cyclosporin A.
Targets(IC50)	Others
In vitro	Cyclosporin H is a potent inhibitor of FMLP-induced superoxide anion (O <sub>2</sub> <sup>-</sup> ) formation in human neutrophils. Cyclosporin H inhibited FMLP binding in HL-60 membranes with a K <sub>i</sub> (inhibition constant) of 0.10 μM. Cyclosporin H inhibited activation by FMLP of high affinity GTPase (the enzymatic activity of alpha-subunits of heterotrimeric regulatory guanine nucleotide-binding proteins) in HL-60 membranes with a K <sub>i</sub> of 0.79 μM. Cyclosporin H inhibited the stimulatory effects of FMLP on cytosolic Ca <sup>2+</sup> concentration ([Ca <sup>2+</sup> ] <sub>i</sub> ), O <sub>2</sub> <sup>-</sup> formation, and beta-glucuronidase release with K <sub>i</sub> values of 0.08, 0.24, and 0.45 μM, respectively.
In vivo	Cyclosporin H, administered intraperitoneally (i.p.) at a dosage of 5 mg/kg prior to challenge with LPS or HCl, mitigates lung injury caused by LPS or HCl in a lung injury model.

## Solubility Information

Solubility	DMSO: 99 mg/mL (82.32 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 3.3 mg/mL (2.74 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	0.8315 mL	4.1576 mL	8.3152 mL
5 mM	0.1663 mL	0.8315 mL	1.663 mL
10 mM	0.0832 mL	0.4158 mL	0.8315 mL
50 mM	0.0166 mL	0.0832 mL	0.1663 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Zhang X, et al. Mitochondrial peptides cause proinflammatory responses in the alveolar epithelium via FPR-1, MAPKs, and AKT: a potential mechanism involved in acute lung injury. *Am J Physiol Lung Cell Mol Physiol.* 2018;315(5):L775-L786.

Wenzel-Seifert K, et al. Cyclosporin H is a potent and selective formyl peptide receptor antagonist. Comparison with N-t-butoxycarbonyl-L-phenylalanyl-L-leucyl-L-phenylalanyl-L-leucyl-L-phenylalanine and cyclosporins A, B, C, D, and E. *J Immunol.* 1993;150(10):4591-4599.

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