Cyclosporin D

Cat. No.: HY-W019721

CAS No.: 63775-96-2

Molecular Formula: $C_{63}H_{113}N_{11}O_{12}$

Molecular Weight: 1216.64

Sequence: cyclo ({Aaa}-Val-{Sar}-Leu-Val-Leu-Ala-Ala-Leu-Leu-{d-Val})

Sequence Shortening: cyclo ({Aaa}-V-{Sar}-LVLAALL-{d-Val})

Target: Nuclear Factor of activated T Cells (NFAT)

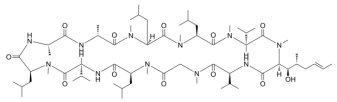
Pathway: Immunology/Inflammation

Storage: Sealed storage, away from moisture

Powder -80°C 2 years

-20°C 1 year

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (20.55 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	0.8219 mL	4.1097 mL	8.2194 mL
	5 mM	0.1644 mL	0.8219 mL	1.6439 mL
	10 mM	0.0822 mL	0.4110 mL	0.8219 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (2.05 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Cyclosporin D, a metabolite of Cyclosporin A, is a weak immunosuppressant. Cyclosporin D is used as internal standard for quantification of Cyclosporin A[1][2]. Cyclosporin A is a potent immunosuppressant agent, suppress T cell activation by inhibiting calcineurin and the calcineurin-dependent transcription factors nuclear factor of activated T cells (NFAc)[3].

In Vitro

Cyclosporine D inhibits Ca^{2+}/calmodulin dependent EF-2 phosphorylation in vitro[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Cyclosporine D is a potent inhibitor in vivo of phorbol ester TPA-induced biological effects in mouse skin[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Gschwendt M, et al. The weak immunosuppressant cyclosporine D as well as the immunologically inactive cyclosporine H are potent inhibitors in vivo of phorbol ester TPA-induced biological effects in mouse skin and of Ca2+/calmodulin dependent EF-2 phosphorylation in vitro. Biochem Biophys Res Commun. 1988 Jan 29;150(2):545-51.

[2]. Kaiser P, et al. A new approach for the determination of immunosuppressive drugs using HPLC-MS/MS and Cs+ adducts. Ger Med Sci. 2006 Jan 18;4:Doc01.

[3]. Minguillón J, et al. Concentrations of cyclosporin A and FK506 that inhibit IL-2 induction in human T cells do not affect TGF-beta1 biosynthesis, whereas higher doses of cyclosporin A trigger apoptosis and release of preformed TGF-beta1. J Leukoc Biol. 2005 May;77(5):748-58. Epub 2005 Feb 16.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA