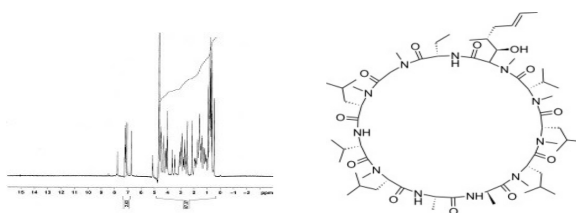


Product Name:	Cyclosporin A, EvoPure®
Product Number:	C042
CAS Number:	59865-13-3
Molecular Formula:	C ₆₂ H ₁₁₁ N ₁₁ O ₁₂
Molecular Weight:	1202.6 g/mol
Form:	Powder
Appearance:	White powder
Solubility:	ethanol (50 mM) and DMSO (100 mM).
Source:	<i>Tolypocladium inflatum</i>
Storage Conditions:	-20°C
Description:	<p>Cyclosporin A, EvoPure® is a neutral, cyclic oligopeptide with immunosuppressive activity. Cyclosporin A has the most potent immunosuppressive activity of all the metabolites (Cyclosporin B, C, D, E, and H). Cyclosporin A has been used to prevent organ transplant rejection. Cyclosporin A is soluble in ethanol (50 mM) and DMSO (100 mM).</p> <p>For more Cyclosporin products, click here.</p>
Mechanism of Action:	<p>After entering a T-cell, Cyclosporin A associates with the cytosolic protein cyclophilin which helps in protein folding. Cyclosporin A binds to cyclophilins and this complex binds another cytosolic protein phosphatase called Calcineurin (protein phosphatase 2B) that dephosphorylates a transcription factor (nuclear factor of activated T-cells, or NF-AT) needed for expression of interleukin 2 (IL-2). It also blocks the pathway to nitric oxide synthesis via tumor necrosis factor (TNFa) and Interleukin 1a.</p>
Cancer Applications	<p>Cyclosporin's immunosuppressive properties and potential toxicity can be studied during <i>in vitro</i> assays. Other metabolites of Cyclosporin A (AM1, AM1c, DihydroAM1, AM19, and AM4N) can also be studied (Vollenbroeker B et al, 2005).</p>

Technical Data:

HNMR Spectra



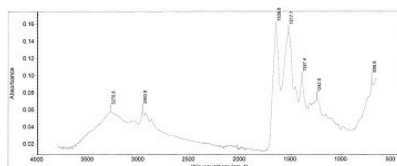
[Click to enlarge](#)

Solvent: cdc13

Instrument: Mercury 300

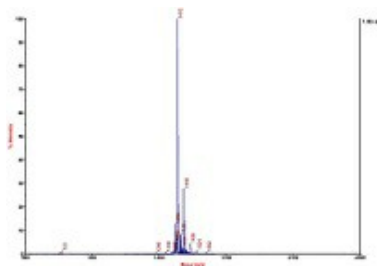
Frequency: 300 MHz

FTIR Spectra



[Click to enlarge](#)

Mass Spectra



[Click to enlarge](#)

Polarity/Scan Type: Positive

Solvent: MeOH

Solution Concentration: 10 mg/mL

Instrument: Agilent

References:

- Anderson MA and Gusella JF (1984) Use of Cyclosporin A in establishing Epstein-Barr virus-transformed human lymphoblastoid cell lines. *In Vitro* 20(11):856-858. PMID 6519667
- Copelan KR, Yatscoff RW and McKenna RM (1990) Immunosuppressive activity of Cyclosporine metabolites compared and characterized by mass spectrometry and nuclear magnetic resonance. *Clin. Chem.* 36(2): 225-229. PMID 2137384
- Dreyfuss, M et al (1976) Cyclosporin A and C. *Eur. J. Appl Microbiol.* 3(2): 125-133
- Laupacis A et al. PA (1982) Cyclosporin A: A powerful immunosuppressant. *Can. Med Assoc. J* 126(9):1041-1046 PMID 7074504 Matsuda S and Koyasu S (2000) Mechanisms of Action of Cyclosporine. *Immunopharmacol.* 47(2-3): 119-125. PMID 10878286
- Oliyai R. & Stella V. J. (1992) Kinetics and mechanism of isomerization of cyclosporin A. *Pharm. Res.* 9(5):617-622
- Stiller, CR and Ulan RA (1981) Cyclosporin A: A Powerful Immunosuppressant." *Can. Med. Assn.* 126 (1981): 1041-046.
- Vollenbroeker B et al (2005) Determination of cyclosporine and its metabolites in blood via HPLC-MS and correlation to clinically important parameters. *Transplant Proc.* 37(4):1741-1744 PMID 15919451
- Wang, PC et al. (1989) Isolation of 10 Cyclosporine Metabolites from Human Bile. *Drug Metab. Dispos.* 17(3): 292-296 PMID 2568911
- Watashi K, Hijikata M, Hosaka M, Yamaji M, Shimotohno K (2003) Cyclosporin A suppresses replication of hepatitis C virus genome in cultured hepatocytes. *Hepatol.* 38(5):1282-1288. PMID 14578868
- Zheng XS, Chan T, and Zhou HH (2004) Genetic and genomic approaches to identify and study the targets of bioactive small molecules. *Chem and Biol* 11(5):609-618 PMID 15157872