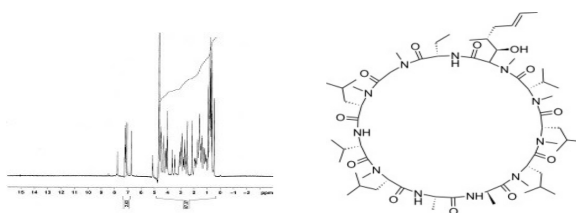


Product Name:	Cyclosporin D, EvoPure®
Product Number:	C045
CAS Number:	63775-96-2
Molecular Formula:	C ₆₃ H ₁₁₃ N ₁₁ O ₁₂
Molecular Weight:	1216.63 g/mol
Form:	Powder
Appearance:	White crystal powder
Source:	<i>Tolypocladium inflatum</i>
Water Content (Karl Fischer):	≤3.0%
Melting Point:	148 -151 °C
Storage Conditions:	-20°C
Description:	<p>Cyclosporin D is a hydroxylated metabolite of cyclosporin A. Cyclosporin D and other cyclosporin metabolites have been found to have lower (<10%) immunosuppressant activity than cyclosporin A. Cyclosporin D has been found to reverse daunorubicin resistance in some resistant leukemia cells by possibly inhibiting the efflux functions of P-glycoprotein.</p> <p>For more cyclosporin products, click here.</p>
Mechanism of Action:	<p>Cyclosporin B (and other cyclosporin A metabolites) have lower immunosuppressive activity but likely operate under the same mechanism as cyclosporin A described below.</p> <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 in vitro 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



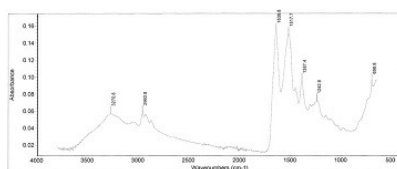
[Click to enlarge](#)

Solvent: CDC13

Instrument: Mercury 300

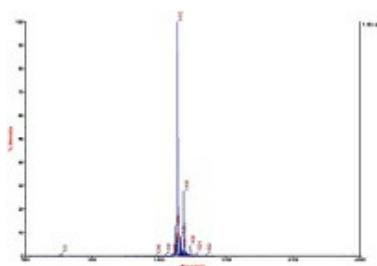
Frequency: 300 MHz

FTIR Spectra



[Click to enlarge](#)

Mass Spectra



[Click to enlarge](#)

Polarity/Scan Type: Positive

Solvent: MeOH

Solution Concentration: 0.1 mg/mL

Instrument: Agilent

References:

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