Molecular Formula:

$C_{62}H_{111}N_{11}O_{12}$

Molecular Weight:

1202.63 g/mol

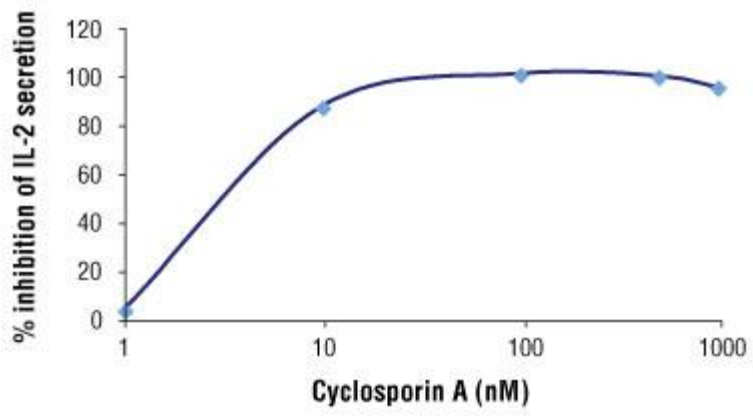
Purity:

>99%

Directions for Use

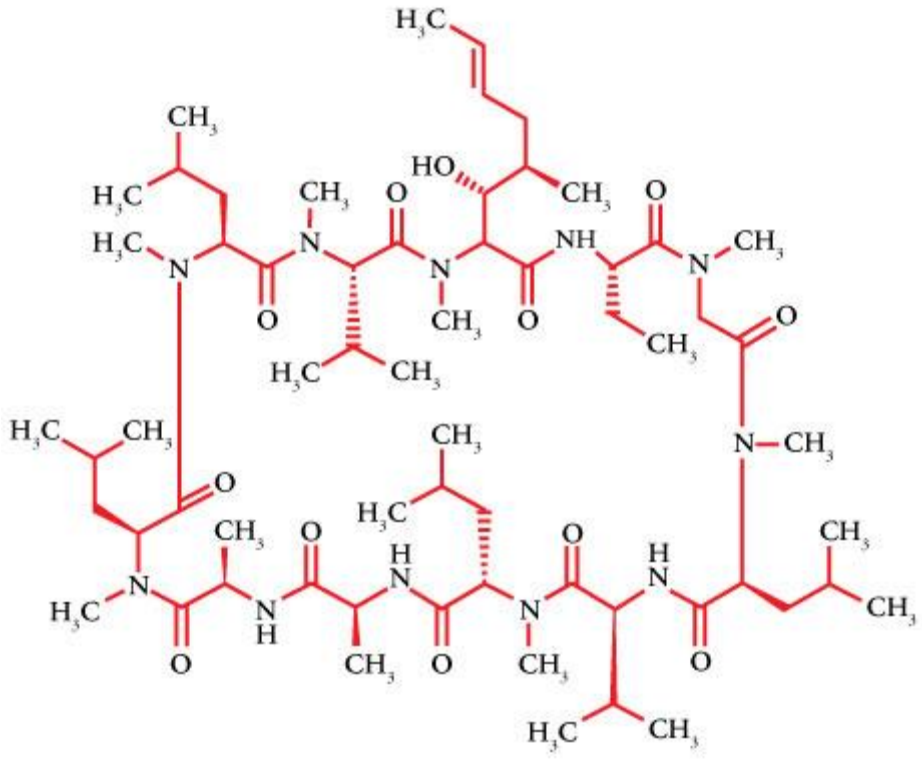
Cyclosporin A is supplied as a 100 mg powder. Store at -20 ℃. Cyclosporin A is soluble in ethanol at 200 mg/ml (also DMSO at 100 mg/ml) and stock solutions should be stored at -20 ℃. Working concentrations and length of treatment can vary depending on the desired effect but it is typically used at around 100 nM.

ELISA



Dose response inhibition of IL-2 by Cyclosporin A in Jurkat cells treated overnight with TPA (40 nM) and A23187 (2 µM).

Structure



Structure of Cyclosporin A

Background

The calcium dependent protein phosphatase calcineurin is responsible for the de-phosphorylation of the transcriptional regulator nuclear factor of activated T cells (NFAT) and is essential for NFAT's nuclear translocation and activation (1,2). Calcineurin is a target of two common immunosuppressants, cyclosporin A (CsA) (3) and FK-506 (also know as tacrolimus and fugimycin) (4), both of which can inhibit antigen and mitogen triggered T cell activation. These drugs interact with the immunophilins cyclophilin and FKBP-12, respectively, and the immunophilin-drug complex binds to calcineurin to inhibit substrate binding (5). FK-506 can be up to 100-fold more potent than CsA in various models (6-8).

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