

# Pimecrolimus

Catalog No: tcsc2691



## Available Sizes

**Size:** 10mg

**Size:** 50mg

**Size:** 100mg



## Specifications

**CAS No:**

137071-32-0

**Formula:**

$C_{43}H_{68}ClNO_{11}$

**Pathway:**

Others

**Target:**

Others

**Purity / Grade:**

>98%

**Solubility:**

DMSO :  $\geq 32$  mg/mL (39.48 mM)

**Alternative Names:**

SDZ-ASM 981

**Observed Molecular Weight:**

810.45

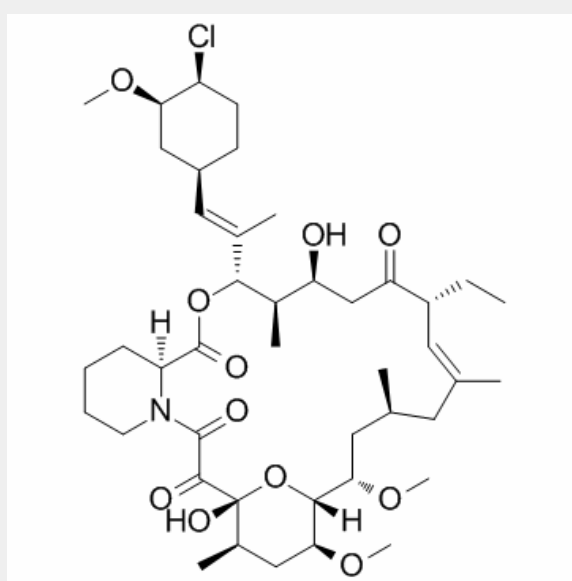
## Product Description

Pimecrolimus is an immunophilin ligand, which binds specifically to the cytosolic receptor, immunophilin macrophilin-12.

Target: Others

Pimecrolimus blocks T-lymphocyte activation pathway by inhibiting calcineurin function [1]. Pimecrolimus prevents the release of cytokines and pro-inflammatory mediators from mast cells. Pimecrolimus binds to macrophilin-12, the pimecrolimus-macrophilin complex then binds to the cytosolic enzyme calcineurin phosphatase. The pimecrolimus-macrophilin complex prevents the dephosphorylation of the cytoplasmic component of the nuclear factor of activated T cells by inhibiting the action of calcineurin. Pimecrolimus inhibits not only the transcription and synthesis of cytokines from mast cells, but also the release of preformed mediators serotonin and  $\beta$ -hexosaminidase by the inhibition of Fc $\epsilon$ -RI-mediated degranulation and secretion. Pimecrolimus treatment causes a strong down-regulation of the expression of mRNA for genes associated with the macrolactam target pathway and inflammation [2].

Pimecrolimus is found to be as effective as cyclosporine A following oral ingestion and slightly superior after subcutaneous administration in mice. Pimecrolimus contrasts cyclosporine A and tacrolimus by inhibiting ongoing secondary inflammatory response, but not impairing the primary immune response in allergic contact dermatitis in mice. [2] Pimecrolimus is as effective as the high-potency corticosteroid clobetasol-17-propionate in a pig model of allergic contact dermatitis (ACD). Pimecrolimus also effectively reduces skin inflammation and pruritus in hypomagnesemic hairless rats, a model that mimics acute signs of atopic dermatitis [3].



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