Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

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 : ≥ 32 mg/mL (39.48 mM)

Alternative Names:
SDZ-ASM 981

Observed Molecular Weight:
810.45

Product Description

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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 pimecrolimusmacrophilin 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 β-hexosaminidase by the inhibition of Fcε-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].