Product Data Sheet

Chemical Properties

Product Name: Pimecrolimus
Cas No.: 137071-32-0
M.Wt: 810.45
Formula: C43H68ClNO11

Chemical Name:
Canonical SMILES: CO[C@@H]1C[C@H]/C=C(C)/[C@@H](OC([C@]2([H]))CCCCN2C([C @]3(0)O)[C@H]([C@@H](OC)C[C@H](C/C=C/4)C[C@@H](OC)C[C@H]3C)=O)=O)[C@H](C)[C@H](CC([C@@H]4CC)=O)O)CC[C@@H]1Cl

Solubility: ≥32.05mg/mL in DMSO
Storage: Store at -20°C
General tips: For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Shopping Condition: Evaluation sample solution: ship with blue ice
All other available size: ship with RT, or blue ice upon request

Biological Activity

Targets:
Pathways:
Description:
Pimecrolimus is a cell-selective inhibitor of inflammatory cytokines secretion in T cells and mast cells [1].
Inflammatory cytokines are cytokines which promote systemic inflammation. Pimecrolimus can be used for the treatment of inflammatory skin diseases, such as plaque-type psoriasis, atopic dermatitis, irritant contact dermatitis and allergic contact dermatitis [1]. Pimecrolimus is a cell-selective inflammatory cytokines secretion inhibitor. Pimecrolimus inhibited the secretion of inflammatory cytokines in mast cells and T cells and also inhibited the release of preformed inflammatory mediators from mast cells. Pimecrolimus exhibited a low potential to impair systemic immune reactions in the skin [1]. In peripheral blood leukocytes contained basophil or mast cells, pimecrolimus inhibited histamine release induced by anti-IgE from basophils and mast cells by 82% and 73%, respectively. Also, pimecrolimus inhibited tryptase, LTC4 and TNF-alpha release [2]. In CD4+ T cells stimulated by dendritic cells (DC), pimecrolimus inhibited the up-regulation of CD25 and CD54 and surface expression of OX40. Pimecrolimus inhibited T cell proliferation with IC50 value of 0.55 nM and inhibited the synthesis of IFN-γ and TNF-α [3]. In treatment of allergic contact dermatitis (ACD) mice and rats, pimecrolimus exhibited a higher potency. In atopic dermatitis rats, pimecrolimus effectively reduced pruritus and skin inflammation [1].

Reference:

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most ApexBio products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.