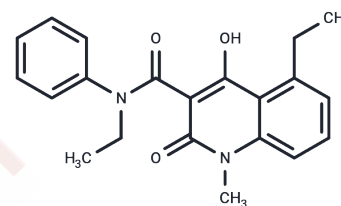


Paquinimod

Chemical Properties

| | |
|-------------------|---|
| CAS No. : | 248282-01-1 |
| Formula: | C ₂₁ H ₂₂ N ₂ O ₃ |
| Molecular Weight: | 350.41 |
| Storage: | Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA. |



Biological Description

| | |
|-----------------|---|
| Description | Paquinimod (ABR 25757) is a S100A9 inhibitor preventing S100A9 binding to TLR-4. |
| Targets(IC50) | Others,SARS-CoV |
| In vivo | Prophylactic treatment of paquinimod reduces synovial activation, osteophyte formation and cartilage damage in experimental OA with high synovial activation (CIOA) and ameliorates pathological effects of S100A9 in OA synovium ex vivo[1].Treatment with paquinimod reduces skin fibrosis measured as reduction of skin thickness and decreased number of myofibroblasts and total hydroxyproline content. The effect on fibrosis was associated with a polarization of macrophages in the skin from a pro-fibrotic M2 to a M1 phenotype. Paquinimod treatment also resulted in a reduced TGFβ-response in the skin and an abrogation of the increased auto-antibody production in this SSc model[1]. |
| Animal Research | Two OA mouse models differing in level of synovial activation were treated prophylactic with paquinimod. Synovial thickening, osteophyte size and cartilage damage were measured histologically, using an arbitrary score, adapted Pritzker OARSI score or imaging software, respectively. Human OA synovia were stimulated with S100A9, with or without paquinimod[1].Seven weeks old female B6.Cg-Fbn1(Tsk)/J (Tsk-1) mice were treated with vehicle or paquinimod at the dose of 5 or 25mg/kg/day in the drinking water for 8 weeks. The effect of paquinimod on the level of skin fibrosis and on different subpopulations within the myeloid cell compartment in skin biopsies were evaluated by using histology, immunohistochemistry, a hydroxyproline assay and real-time PCR. Furthermore, the level of IgG in serum from treated animals was also analysed. The statistical analyses were performed using Mann-Whitney nonparametric two tailed rank test[1]. |

Solubility Information

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|------------|--|
| Solubility | DMSO: 123 mg/mL (351.02 mM),Sonication is recommended. H ₂ O: < 1 mg/mL (insoluble) (< 1 mg/ml refers to the product slightly soluble or insoluble) |
|------------|--|

| | |
|---------------------|--|
| In vivo Formulation | 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 12.5 mg/mL (35.67 mM), Suspension. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i> |
|---------------------|--|

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|-------|-----------|-----------|-----------|
| 1 mM | 2.8538 mL | 14.269 mL | 28.538 mL |
| 5 mM | 0.5708 mL | 2.8538 mL | 5.7076 mL |
| 10 mM | 0.2854 mL | 1.4269 mL | 2.8538 mL |
| 50 mM | 0.0571 mL | 0.2854 mL | 0.5708 mL |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

- Lee JU, et al. Inhibitory Effect of Paquinimod on a Murine Model of Neutrophilic Asthma Induced by Ovalbumin with Complete Freund's Adjuvant. *Can Respir J.* 2021 Mar 15;2021:8896108.
- Guo Q, Zhao Y, Li J, et al. Induction of alarmin S100A8/A9 mediates activation of aberrant neutrophils in the pathogenesis of COVID-19. *Cell Host & Microbe.* 2020
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- Jiang H, Zhao Y, Su M, et al. A proteome-wide screen identifies the calcium binding proteins, S100A8/S100A9, as clinically relevant therapeutic targets in aortic dissection. *Pharmacological Research.* 2023: 107029.
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- Shou C, Sun Y, Zhang Q, et al. S100A9 Inhibition Mitigates Acute Pancreatitis by Suppressing RAGE Expression and Subsequently Ameliorating Inflammation. *Inflammation.* 2024: 1-12.

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