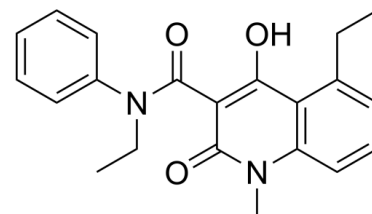


Data Sheet

Product Name:	Paquinimod
Cat. No.:	CS-0019027
CAS No.:	248282-01-1
Molecular Formula:	C ₂₁ H ₂₂ N ₂ O ₃
Molecular Weight:	350.41
Target:	SARS-CoV
Pathway:	Anti-infection
Solubility:	H ₂ O : < 0.1 mg/mL (ultrasonic;warming;heat to 60°C);DMSO : 62.5 mg/mL (ultrasonic)



BIOLOGICAL ACTIVITY:

Paquinimod (ABR 215757) is a specific and orally active inhibitor of **S100A8/S100A9**. Paquinimod rescues the pneumonia with substantial reduction of viral loads in SARS-CoV-2-infected mice^{[1][2][3]}. IC50 & Target:S100A9^[1] *In Vivo*: S100A9 is a calcium-binding protein of the S100 family. Paquinimod is an immunomodulatory compound preventing S100A9 binding to TLR-4. Prophylactic treatment with S100A9 inhibitor Paquinimod reduces pathology in experimental collagenase-induced osteoarthritis^[1]. Paquinimod is a potent inhibitor of insulinitis and diabetes development in the NOD mouse. To assess the preventive efficacy of Paquinimod on diabetes development in female NOD mice, groups of mice are treated with daily doses of 0.04, 0.2, 1, and 5 mg/kg/day of Paquinimod from week 10 of age until week 20 of age. Glycosuria is analyzed on a weekly basis from 10 weeks of age until the endpoint of the experiment at 40 weeks of age. There is a clear dose-dependent reduction in diabetes development in the Paquinimod-treated mice^[2].

PROTOCOL (Extracted from published papers and Only for reference)

Animal Administration: ^[2]Mice^[2]

Female NOD/MrkTac mice are exposed to increasing concentration of CO₂ and upon loss of consciousness euthanized by cervical dislocation. To investigate the effect of the Q-compound Paquinimod on development of glycosuria and insulinitis, mice are treated with **Paquinimod** dissolved in drinking water at different concentrations corresponding to **daily doses of about 0.04, 0.2, 1, and 5 mg/kg body weight/day**). The mice are treated with Paquinimod starting from either 10 or 15 weeks of age. The duration of treatment varies from 5 to 23 weeks in the different experiments performed^[2].

References:

- [1]. Schelbergen RF, et al. Prophylactic treatment with S100A9 inhibitor paquinimod reduces pathology in experimental collagenase-induced osteoarthritis. *Ann Rheum Dis*. 2015 Dec;74(12):2254-8.
- [2]. Tahvili S, et al. Paquinimod prevents development of diabetes in the non-obese diabetic (NOD) mouse. *PLoS One*. 2018 May 9;13(5):e0196598.
- [3]. Qirui Guo, et al. Induction of alarmin S100A8/A9 mediates activation of aberrant neutrophils in the pathogenesis of COVID-19. *Cell Host Microbe*. 2021 Feb 10;29(2):222-235.e4.

CAIndexNames:

3-Quinolincarboxamide, N,5-diethyl-1,2-dihydro-4-hydroxy-1-methyl-2-oxo-N-phenyl-

SMILES:

O=C(C1=C(O)C2=C(C=CC=C2CC)N(C)C1=O)N(CC)C3=CC=CC=C3

Caution: Product has not been fully validated for medical applications. For research use only.

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