Paquinimod

Cat. No.: HY-100442
CAS No.: 248282-01-1
Molecular Formula: C₂₁H₂₂N₂O₃
Molecular Weight: 350.41
Target: Toll-like Receptor (TLR)
Pathway: Immunology/Inflammation
Storage: Powder -20°C 3 years
4°C 2 years
In solvent -80°C 6 months
-20°C 1 month

Solvent & Solubility

In Vitro DMSO : ≥ 125 mg/mL (356.72 mM)
* “≥” means soluble, but saturation unknown.

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Concentration</th>
<th>Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td></td>
<td>2.8538 mL</td>
<td>14.2690 mL</td>
<td>28.5380 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td></td>
<td>0.5708 mL</td>
<td>2.8538 mL</td>
<td>5.7076 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td></td>
<td>0.2854 mL</td>
<td>1.4269 mL</td>
<td>2.8538 mL</td>
</tr>
</tbody>
</table>

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description Paquinimod is a S100A9 inhibitor, which prevents S100A9 binding to TLR-4.

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 insulitis 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].
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 insulitis, 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]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES
