PF-4136309

Cat. No.: HY-13245
CAS No.: 1341224-83-6
Molecular Formula: C₂₉H₃₁F₃N₆O₃
Molecular Weight: 568.59
Target: CCR
Pathway: GPCR/G Protein; Immunology/Inflammation
Storage:
- Powder -20°C 3 years
- 4°C 2 years
- In solvent -80°C 6 months
- -20°C 1 month

Solvent & Solubility

<table>
<thead>
<tr>
<th>Solvent &amp; Solubility</th>
<th>DMSO : ≥ 34 mg/mL (59.80 mM)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>“≥” means soluble, but saturation unknown.</td>
</tr>
</tbody>
</table>

Preparing Stock Solutions

<table>
<thead>
<tr>
<th>Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mm</td>
<td>1.7587 mL</td>
<td>8.7937 mL</td>
<td>17.5874 mL</td>
</tr>
<tr>
<td>5 mm</td>
<td>0.3517 mL</td>
<td>1.7587 mL</td>
<td>3.5175 mL</td>
</tr>
<tr>
<td>10 mm</td>
<td>0.1759 mL</td>
<td>0.8794 mL</td>
<td>1.7587 mL</td>
</tr>
</tbody>
</table>

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

BIOLOGICAL ACTIVITY

Description
PF-4136309 is a potent, selective, and orally bioavailable CCR2 antagonist, with IC₅₀ of 5.2 nM, 17 nM and 13 nM for human, mouse and rat CCR2.

IC₅₀ & Target
Human CCR2, IC₅₀: 5.2 nM; Mouse CCR2, IC₅₀: 13 nM; Rat CCR2, IC₅₀: 17 nM

In Vitro
PF-4136309 is potent in human chemotaxis activity (IC₅₀=3.9 nM) and in the whole blood assay (IC₅₀=19 nM), with IC₅₀ of 16 and 2.8 nM in mouse and rat chemotaxis assays. PF-4136309 is potent in inhibiting CCR2 mediated signaling events such as intracellular calcium mobilization and ERK (extracellular signal-regulated kinase) phosphorylation with IC₅₀ values of 3.3 and 0.5 nM, respectively. In hERG patch clamp assay, PF-4136309 inhibits hERG potassium current with an IC₅₀ of 20 μM. PF-4136309 is not a cytochrome P450 (CYP) inhibitor, with IC₅₀ values of >30 μM against five major CYP isozymes CYP1A2, CYP2C9, CYP2C19, CYP2D6, and CYP3A4. Moreover, PF-4136309 is not a CYP inducer at concentrations up to 30 μM[^1].
PF-4136309 (2 mg/kg) exhibits a moderate half-life in both species after iv administration (2.5 and 2.4 h). When administered orally, PF-4136309 (10 mg/kg) is absorbed rapidly, with peak concentration time ($T_{\text{max}}$) at 1.2 h for rats and 0.25 h for dogs. A similar half-life is observed in both species between iv dosing and po dosing. PF-4136309 is well absorbed, with an oral bioavailability of 78% in both species[1].

REFERENCES