RTI-13951-33 hydrochloride

Cat. No.: HY-112612A
Molecular Formula: C₂₈H₃₅Cl₂N₃O₃
Molecular Weight: 532.5
Target: Others
Pathway: Others
Storage: -20°C, sealed storage, away from moisture
* In solvent: -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

SOLVENT & SOLUBILITY

**In Vitro**

DMSO: 50 mg/mL (93.90 mM; Need ultrasonic)
H₂O: 50 mg/mL (93.90 mM; Need ultrasonic)

<table>
<thead>
<tr>
<th>Solvent Concentration</th>
<th>Mass 1 mg</th>
<th>Mass 5 mg</th>
<th>Mass 10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>1.8779 mL</td>
<td>9.3897 mL</td>
<td>18.7793 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.3756 mL</td>
<td>1.8779 mL</td>
<td>3.7559 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.1878 mL</td>
<td>0.9390 mL</td>
<td>1.8779 mL</td>
</tr>
</tbody>
</table>

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

**In Vivo**

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (3.91 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (3.91 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (3.91 mM); Clear solution

BIOLOGICAL ACTIVITY

**Description**

RTI-13951-33 hydrochloride is a potent, selective, and brain-penetrant GPR88 agonist, with an EC₅₀ of 25 nM in GPR88 cAMP functional assay. RTI-13951-33 hydrochloride reduces alcohol reinforcement and intake behaviors in rats[1].

**IC₅₀ & Target**

EC₅₀: 25 nM (GPR88)[1]

**In Vitro**

RTI-13951-33 is a potent, selective, and brain-penetrant GPR88 agonist, with an EC₅₀ of 25 nM in GPR88 cAMP functional assay. RTI-13951-33 elevates [³⁵S]-GTPγS binding (EC₅₀, 535 nM) in mouse striatal membranes but not in membranes from GPR88 KO mice[1].
RTI-13951-33 has weak affinities at kappa opioid receptor (KOR; $K_i$, 2.29 μM), vesicular monoamine transporter (VMAT; $K_i$, 4.23 μM), and moderate affinity at serotonin transporter (SERT; $K_i$, 0.75 μM), however, RTI-13951-33 poorly inhibits SERT (IC$_{50}$, 25.1±2.7 μM)$^{[1]}$.

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

**In Vivo**

RTI-13951-33 (10 and 20 mg/kg, i.p.) dose-dependently decreases alcohol lever responses in a rat model of alcohol self-administration$^{[1]}$.

RTI-13951-33 (10 mg/kg, i.p.) has sufficient brain penetration, with $t_{1/2}$ of 48 min and 87 min in rat plasma and brain$^{[1]}$.

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

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**REFERENCES**


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

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