Soticlestat

Cat. No.: HY-109123
CAS No.: 1429505-03-2
Molecular Formula: C₂₃H₂₃N₃O₂
Molecular Weight: 373.45
Target: Cytochrome P450
Pathway: Metabolic Enzyme/Protease
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 : 100 mg/mL (267.77 mM; Need ultrasonic)

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Concentration</th>
<th>Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td></td>
<td>2.6777 mL</td>
<td>13.3887 mL</td>
<td>26.7773 mL</td>
<td></td>
</tr>
<tr>
<td>5 mM</td>
<td></td>
<td>0.5355 mL</td>
<td>2.6777 mL</td>
<td>5.3555 mL</td>
<td></td>
</tr>
<tr>
<td>10 mM</td>
<td></td>
<td>0.2678 mL</td>
<td>1.3389 mL</td>
<td>2.6777 mL</td>
<td></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: ≥ 2.5 mg/mL (6.69 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (6.69 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.69 mM); Clear solution

BIOLOGICAL ACTIVITY

Description
Soticlestat (TAK-935; OV935) is a first-in-class, potent, selective, and orally active cholesterol 24-hydroxylase (CYP46A1) inhibitor. Soticlestat has the potential for epilepsy syndromes research[1][2].

In Vitro
Soticlestat inhibits the catalytic activity of human cholesterol 24-hydroxylase (CH24H) in a concentration-dependent manner with an IC₅₀ of 4.5 nM[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo

Soticlestat treatment lowers brain 24S-hydroxycholesterol in a dose-dependent manner and substantially reduced premature deaths of APP/PS1-Tg mice at a dose lowering brain 24S-hydroxycholesterol by approximately 50%. Soticlestat can suppress potassium-evoked extracellular glutamate elevations in the hippocampus[1].

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

<table>
<thead>
<tr>
<th>Animal Model:</th>
<th>Amyloid precursor protein and presenilin 1 (APP/PS1-Tg) mice (7-week-old)[1]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dosage:</td>
<td>10 mg/kg</td>
</tr>
<tr>
<td>Administration:</td>
<td>Oral administration; once daily; for 1 days, 3 days and 7 days</td>
</tr>
<tr>
<td>Result:</td>
<td>Lowered brain 24S-hydroxycholesterol in a dose-dependent manner and substantially reduced premature deaths of APP/PS1-Tg mice at a dose lowering brain 24S-hydroxycholesterol by approximately 50%.</td>
</tr>
</tbody>
</table>

REFERENCES
