APX-115

Cat. No.: HY-120801
CAS No.: 1395946-75-4
Molecular Formula: C₁₇H₁₈ClN₃O
Molecular Weight: 315.8
Target: NADPH Oxidase
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 : ≥ 250 mg/mL (791.64 mM)
* "≥" means soluble, but saturation unknown.

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Concentration</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>3.1666 mL</td>
<td>15.8328 mL</td>
<td>31.6656 mL</td>
<td></td>
</tr>
<tr>
<td>5 mM</td>
<td>0.6333 mL</td>
<td>3.1666 mL</td>
<td>6.3331 mL</td>
<td></td>
</tr>
<tr>
<td>10 mM</td>
<td>0.3167 mL</td>
<td>1.5833 mL</td>
<td>3.1666 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: ≥ 2.08 mg/mL (6.59 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (6.59 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (6.59 mM); Clear solution

BIOLOGICAL ACTIVITY

Description
APX-115 (Ewha-18278) is a potent, orally active pan NADPH oxidase (Nox) inhibitor with Ki values of 1.08 μM, 0.57 μM, and 0.63 μM for Nox1, Nox2 and Nox4, respectively. APX-115 effectively prevents kidney injury[1].

IC₅₀ & Target
Ki: 1.08 μM (Nox1), 0.57 μM (Nox2) and 0.63 μM (Nox4)[1]
**In Vitro**

APX-115 (5 μM; 60 min) almost completely suppresses high glucose-induced proinflammatory and profibrotic molecule expression in the mouse podocyte cell line[2]. In the kidney, APX-115 attenuates Nox gene upregulation and protein expression while improving inflammatory and fibrotic processes[2].

**In Vivo**

APX-115 (oral gavage; 60 mg/kg/day; for 12 weeks) significantly improves insulin resistance in diabetic mice[2]. APX-115 treatment decreases the urinary excretion of albumin and plasma creatinine levels[2].

<table>
<thead>
<tr>
<th>Animal Model:</th>
<th>Six-week-old male diabetic db/db mice (C57BLKS/J-lepr&lt;sup&gt;db&lt;/sup&gt;/lepr&lt;sup&gt;db&lt;/sup&gt;)[2]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dosage:</td>
<td>60 mg/kg</td>
</tr>
<tr>
<td>Administration:</td>
<td>Oral gavage; per day; for 12 weeks</td>
</tr>
<tr>
<td>Result:</td>
<td>Significantly improved insulin resistance in diabetic mice.</td>
</tr>
</tbody>
</table>

**REFERENCES**
