Eleclazine hydrochloride

**Cat. No.:** HY-16738A

**CAS No.:** 1448754-43-5

**Molecular Formula:** C₂₁H₁₇ClF₃N₃O₃

**Molecular Weight:** 451.83

**Target:** Sodium Channel

**Pathway:** Membrane Transporter/Ion Channel

**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: \(\geq 100\text{ mg/mL (221.32 mM)}\)

* "\(\geq\)" means soluble, but saturation unknown.

#### Preparing Stock Solutions

<table>
<thead>
<tr>
<th>Solvent</th>
<th>Mass</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mg</td>
<td></td>
</tr>
<tr>
<td>5 mg</td>
<td></td>
</tr>
<tr>
<td>10 mg</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concentration</th>
<th>1 mM</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 mM</td>
<td>2.2132 mL</td>
<td>11.0661 mL</td>
<td>22.1322 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.4426 mL</td>
<td>2.2132 mL</td>
<td>4.4264 mL</td>
</tr>
<tr>
<td>1 mM</td>
<td>0.2213 mL</td>
<td>1.1066 mL</td>
<td>2.2132 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: \(\geq 2.5\text{ mg/mL (5.53 mM)}\); Clear solution

2. Add each solvent one by one: **10% DMSO >> 90% (20% SBE-β-CD in saline)**
   - Solubility: \(\geq 2.5\text{ mg/mL (5.53 mM)}\); Clear solution

3. Add each solvent one by one: **10% DMSO >> 90% corn oil**
   - Solubility: \(\geq 2.5\text{ mg/mL (5.53 mM)}\); Clear solution

### BIOLOGICAL ACTIVITY

**Description**

Eleclazine hydrochloride is a novel late Na⁺ current inhibitor with IC₅₀ value of 0.7 uM. Target: Na⁺ current. IC₅₀: 0.7 uM.

In vitro: Eleclazine hydrochloride inhibits ATX-II enhanced late INa in ventricular myocytes, shorten the ATX-II induced prolongation of APD, MAPD, QT interval, and decreased spatiotemporal dispersion of repolarization and ventricular arrhythmias. Inhibition by GS-6615 of ATX-II enhanced late INa is strongly correlated with shortening of myocyte APD and isolated heart MAPD[1]. Selective inhibition of cardiac late INa with eleclazine hydrochloride.
confers dual protection against vulnerability to ischemia-induced AF and reduces atrial and ventricular repolarization abnormalities before and during adrenergic stimulation without negative inotropic effects. [2]

REFERENCES


[2]. Justo F et al. Inhibition of the cardiac late sodium current with eleclazine protects against ischemia-induced vulnerability to atrial fibrillation and reduces atrial and ventricular repolarization abnormalities in the absence and presence of concurrent a