Fexofenadine hydrochloride

Cat. No.: HY-B0801A
CAS No.: 153439-40-8
Molecular Formula: $C_{32}H_{40}ClNO_4$
Molecular Weight: 538.12
Target: Histamine Receptor
Pathway: GPCR/G Protein; Immunology/Inflammation; Neuronal Signaling
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 : $\geq 100$ mg/mL (185.83 mM)
* "$\geq$" means soluble, but saturation unknown.

Preparing Stock Solutions

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Mass Concentration</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td></td>
<td>1.8583 mL</td>
<td>9.2916 mL</td>
<td>18.5832 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td></td>
<td>0.3717 mL</td>
<td>1.8583 mL</td>
<td>3.7166 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td></td>
<td>0.1858 mL</td>
<td>0.9292 mL</td>
<td>1.8583 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: $\geq 2.5$ mg/mL (4.65 mM); Clear solution
2. Add each solvent one by one: 10% DMSO $>>$ 90% (20% SBE-β-CD in saline)
   Solubility: $\geq 2.5$ mg/mL (4.65 mM); Clear solution
3. Add each solvent one by one: 10% DMSO $>>$ 90% corn oil
   Solubility: $\geq 2.5$ mg/mL (4.65 mM); Clear solution

BIOLOGICAL ACTIVITY

Description
Fexofenadine hydrochloride (MDL-16455 hydrochloride), a H1R antagonist, is an anti-allergic agent used in seasonal allergic rhinitis and chronic idiopathic urticarial (person aged ≥16 years)$^{[1]}$.

IC$_{50}$ & Target
H1R$^{[1]}$
**In Vitro**

Fexofenadine hydrochloride (MDL-16455 hydrochloride) (100 µM; 1 hour) effectively blocks phosphorylated p38 activation in histamine-induced nasal fibroblasts\(^2\).

**Western Blot Analysis\(^2\)**

<table>
<thead>
<tr>
<th></th>
<th>Nasal Fibroblasts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cell Line:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Concentration:</strong></td>
<td>100 µM</td>
</tr>
<tr>
<td><strong>Incubation Time:</strong></td>
<td>1 hour</td>
</tr>
<tr>
<td><strong>Result:</strong></td>
<td>Effectively blocked phosphorylated p38 activation in histamine-induced nasal fibroblasts.</td>
</tr>
</tbody>
</table>

**In Vivo**

Fexofenadine hydrochloride (MDL-16455 hydrochloride) (5-20 mg/kg; oral daily for 3 weeks) dose-dependently suppresses eosinophilia in C57BL/6 mice infected with *T. spiralis*\(^1\).

<table>
<thead>
<tr>
<th></th>
<th>C57BL/6 mice(^1)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Animal Model:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Dosage:</strong></td>
<td>5, 10, 20 mg/kg</td>
</tr>
<tr>
<td><strong>Administration:</strong></td>
<td>Orally; daily for 3 weeks</td>
</tr>
<tr>
<td><strong>Result:</strong></td>
<td>Specifically dose-dependently suppressed eosinophilia in C57BL/6 mice infected with <em>T. spiralis</em>.</td>
</tr>
</tbody>
</table>

**REFERENCES**
