**Fenspiride Hydrochloride**

**Cat. No.:** HY-A0027  
**CAS No.:** 5053-08-7  
**Molecular Formula:** \( \text{C}_{15}\text{H}_{21}\text{ClN}_{2}\text{O}_{2} \)  
**Molecular Weight:** 296.79  
**Target:** Adrenergic Receptor; Histamine Receptor  
**Pathway:** GPCR/G Protein; Neuronal Signaling; Immunology/Inflammation  
**Storage:**  
- Powder: -20°C  3 years  
- 4°C: 2 years  
- In solvent: -80°C  6 months  
- -20°C: 1 month

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**SOLVENT & SOLUBILITY**

**In Vitro**  
- **H\(_2\)O:** 50 mg/mL (168.47 mM; Need ultrasonic)  
- **DMSO:** 33.33 mg/mL (112.30 mM; Need ultrasonic)

<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></td>
<td>3.3694 mL</td>
<td>16.8469 mL</td>
<td>33.6939 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td></td>
<td>0.6739 mL</td>
<td>3.3694 mL</td>
<td>6.7388 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td></td>
<td>0.3369 mL</td>
<td>1.6847 mL</td>
<td>3.3694 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: ≥ 2.75 mg/mL (9.27 mM); Clear solution

2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.75 mg/mL (9.27 mM); Clear solution

3. Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.75 mg/mL (9.27 mM); Clear solution

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**BIOLOGICAL ACTIVITY**

**Description**  
Fenspiride HCl is an \( \alpha \) adrenergic and H1 histamine receptor antagonist. IC50 value: Target: Adrenergic receptor; H1 receptor. Fenspiride hydrochloride is a bronchodilator with anti-inflammatory properties. Fenspiride hydrochloride inhibits mucus secretion and reduces the release of tachykinins at a prejunctional level. Fenspiride hydrochloride also may be an antagonist at \( \alpha \) adrenergic and H1 histamine receptors.
REFERENCES


[5]. Fenspiride