### Eprazinone dihydrochloride

**Cat. No.**  HY-B2078A  
**CAS No.**  10402-53-6  
**Molecular Formula**  \( \text{C}_{24}\text{H}_{34}\text{Cl}_{2}\text{N}_{2}\text{O}_{2} \)  
**Molecular Weight**  453.44  
**Target**  Neurokinin Receptor  
**Pathway**  GPCR/G Protein; 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: 6.25 mg/mL (13.78 mM; ultrasonic and warming and heat to 60°C)

<table>
<thead>
<tr>
<th>Solvent &amp; Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>2.2054 mL</td>
<td>11.0268 mL</td>
<td>22.0536 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.4411 mL</td>
<td>2.2054 mL</td>
<td>4.4107 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.2205 mL</td>
<td>1.1027 mL</td>
<td>2.2054 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 >> 90% corn oil  
   Solubility: ≥ 6.25 mg/mL (13.78 mM); Clear solution

2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
   Solubility: ≥ 0.62 mg/mL (1.37 mM); Clear solution

3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
   Solubility: ≥ 0.62 mg/mL (1.37 mM); Clear solution

### BIOLOGICAL ACTIVITY

**Description**  
Eprazinone dihydrochloride is a gent with mucolytic, secretolytic, antitussive, and bronchial antispasmodic properties. Eprazinone dihydrochloride is a neurokinin 1 receptor (NK1R) ligand. Eprazinone dihydrochloride has the potential for chronic bronchitis treatment that improved pulmonary function and arterial partial pressure of oxygen\[^1\][^2]\.

**IC\textsubscript{50} & Target**  
Neurokinin 1 receptor[^1]\n
**In Vitro**  
Eprazinone specifically displaces binding to the NK1R. Although Eprazinone displays a rather weak inhibition of \[^{125}\text{I}]\text{BH-SP...
binding to NK1R, at a concentration of 25 μM, and an antagonistic effect of about 30%, NK1R blockade could contribute to its mucolytic activity[2].

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

<table>
<thead>
<tr>
<th>In Vivo</th>
<th>Eprazinone (50-200 mg/kg; oral gavage; daily; for 4 days; adult male rats) at a dose of 200 mg/kg significantly increases total and individual (with the exception of phosphatidylinositol) phospholipid levels and decreases total neutral lipids. Lower doses of Eprazinone significantly decrease neutral lipid levels without affecting the phospholipids[1]. In airway epithelial studies, mucosal addition of Eprazinone produces a dose-dependent partially reversible decrease in short-circuit current (Isc). The decrease in Isc at lower Eprazinone concentrations is accounted for entirely by a decrease in net chloride secretion while at higher concentrations both sodium and chloride transport are affected[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal Model:</td>
<td>Adult male pathogen free Fischer 344 inbred rats (200-250 g)[1]</td>
</tr>
<tr>
<td>Dosage:</td>
<td>50 mg/kg, 100 mg/kg, and 200 mg/kg</td>
</tr>
<tr>
<td>Administration:</td>
<td>Oral gavage; daily; for 4 days</td>
</tr>
<tr>
<td>Result:</td>
<td>At a dose of 200 mg/kg significantly increased total and individual (with the exception of phosphatidylinositol) phospholipid levels and decreased total neutral lipids.</td>
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REFERENCES
