Prilocaine

**Cat. No.:** HY-B0137  
**CAS No.:** 721-50-6

**Molecular Formula:** $C_{13}H_{20}N_2O$  
**Molecular Weight:** 220.31

**Target:** Na+/K+ ATPase  
**Pathway:** Membrane Transporter/Ion Channel

**Storage:**  
- Powder: -20°C, 3 years; 4°C, 2 years  
- In solvent: -80°C, 2 years; -20°C, 1 year

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**SOLVENT & SOLUBILITY**

**In Vitro**  
DMSO: 100 mg/mL (453.91 mM; Need ultrasonic)  
H$_2$O: 2.5 mg/mL (11.35 mM; Need ultrasonic)

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Concentration</th>
<th>Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td></td>
<td>4.5391 mL</td>
<td>22.6953 mL</td>
<td>45.3906 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td></td>
<td>0.9078 mL</td>
<td>4.5391 mL</td>
<td>9.0781 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td></td>
<td>0.4539 mL</td>
<td>2.2695 mL</td>
<td>4.5391 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: PBS  
   Solubility: 50 mg/mL (22.95 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
   Solubility: ≥ 2.5 mg/mL (11.35 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
   Solubility: ≥ 2.5 mg/mL (11.35 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil  
   Solubility: ≥ 2.5 mg/mL (11.35 mM); Clear solution

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**BIOLOGICAL ACTIVITY**

**Description**  
Prilocaine, an amino amide, is a Na, K-ATPase inhibitor. Prilocaine has neurotoxic effects$^{[1][2]}$.

**IC$_{50}$ & Target**  
Na, K-ATPase$^{[2]}$
Prilocaine is more potent in inhibiting the Na,K-ATPase of plasma membranes of LM cells (transformed fibroblasts) at 37 °C (43.8 mM) than at 25 °C (28.2 mM)\(^2\).

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

**REFERENCES**
