5-(N,N-Hexamethylene)-amiloride

**Product Data Sheet**

**Cat. No.:** HY-128067  
**CAS No.:** 1428-95-1  
**Molecular Formula:** C₁₂H₁₈ClN₇O  
**Molecular Weight:** 311.77  
**Target:** Sodium Channel; HIV; Apoptosis  
**Pathway:** Membrane Transporter/Ion Channel; Anti-infection; Apoptosis  
**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: 100 mg/mL (320.75 mM; Need ultrasonic)

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Concentration</th>
<th>Mass</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mg</td>
<td>5 mg</td>
</tr>
<tr>
<td>1 mM</td>
<td>3.2075 mL</td>
<td>16.0375 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.6415 mL</td>
<td>3.2075 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.3207 mL</td>
<td>1.6037 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: ≥ 2.08 mg/mL (6.67 mM); Clear solution; Need ultrasonic

2. Add each solvent one by one: **10% DMSO** >> **90% (20% SBE-β-CD in saline)**
   Solubility: ≥ 2.08 mg/mL (6.67 mM); Clear solution

3. Add each solvent one by one: **10% DMSO** >> **90% corn oil**
   Solubility: ≥ 2.08 mg/mL (6.67 mM); Clear solution

### BIOLOGICAL ACTIVITY

**Description**  
5-(N,N-Hexamethylene)-amiloride (Hexamethylene amiloride) derives from an amiloride and is a potent Na⁺/H⁺ exchanger inhibitor, which decreases the intracellular pH (pHᵢ) and induces apoptosis in leukemic cells. 5-(N,N-Hexamethylene)-amiloride (Hexamethylene amiloride) is also an inhibitor of the HIV-1 Vpu virus ion channel and inhibits mouse hepatitis virus (MHV) replication and human coronavirus 229E (HCoV229E) replication in cultured L929 cells with EC₅₀s of 3.91 μM and 1.34 μM, respectively[^1][^2].
<table>
<thead>
<tr>
<th>IC₅₀ &amp; Target</th>
<th>Na⁺/H⁺ exchanger[1]</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC₅₀</td>
<td>3.91 μM (MHV replication), 1.34 μM (HCoV229E replication)[2]</td>
</tr>
</tbody>
</table>

REFERENCES
