Azathramycin

**Cat. No.:** Hy-17442  
**CAS No.:** 76801-85-9  
**Molecular Formula:** C₃₇H₇₀N₂O₁₂  
**Molecular Weight:** 734.96  
**Target:** Bacterial; Autophagy  
**Pathway:** Anti-infection; Autophagy  
**Storage:**  
- Powder: -20°C 3 years, 4°C 2 years  
- In solvent: -80°C 6 months, -20°C 1 month

### Solvent & Solubility

**In Vitro**  
10 mM in DMSO

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Concentration</th>
<th>Mass (1 mg)</th>
<th>Mass (5 mg)</th>
<th>Mass (10 mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>1.3606 mL</td>
<td>6.8031 mL</td>
<td>13.6062 mL</td>
<td></td>
</tr>
<tr>
<td>5 mM</td>
<td>0.2721 mL</td>
<td>1.3606 mL</td>
<td>2.7212 mL</td>
<td></td>
</tr>
<tr>
<td>10 mM</td>
<td>0.1361 mL</td>
<td>0.6803 mL</td>
<td>1.3606 mL</td>
<td></td>
</tr>
</tbody>
</table>

Please refer to the solubility information to select the appropriate solvent.

### BIOLOGICAL ACTIVITY

**Description**  
Azithromycin, derived from erythromycin, is an antibiotic. Azithromycin binds to the 50S subunit of the bacterial ribosome, and thus inhibits translation of mRNA. IC50 Value: Target: Antibacterial  
Azithromycin is an azalide, a subclass of macrolide antibiotics. Azithromycin is one of the world’s best-selling antibiotics.  
**in vitro:** The geometric mean 50% inhibitory concentration (IC50) of azithromycin was 2,570.3 (95% CI=2,175.58 to 3,036.58) ng/ml [1]. Azithromycin, clarithromycin and roxithromycin inhibited the proliferation of both the concanavalin A- and superantigen-stimulated PBMCs dose-dependently. The effect of azithromycin was the strongest, with IC50 values of less than 5 ?g/ml [2].  
**in vivo:** Azithromycin produced a slightly higher percentage of patients with a greater than 80% reduction in their inflammatory acne lesions (85.7%) vs. an average of 77.1% for all other agents [3].

### REFERENCES
