**ALC-0315**

**Cat. No.:** HY-138170  
**CAS No.:** 2036272-55-4  
**Molecular Formula:** \(C_{48}H_{95}NO_5\)  
**Molecular Weight:** 766.27  
**Target:** SARS-CoV  
**Pathway:** Anti-infection  
**Storage:** 4°C, protect from light  
* In solvent: -80°C, 6 months; -20°C, 1 month (protect from light)

**SOLVENT & SOLUBILITY**

**In Vitro**  
**Ethanol:** 100 mg/mL (130.50 mM; Need ultrasonic)  
**DMSO:** 100 mg/mL (130.50 mM; Need ultrasonic)

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Concentration</th>
<th>Mass 1 mg</th>
<th>Mass 5 mg</th>
<th>Mass 10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td>1.3050 mL</td>
<td>6.5251 mL</td>
<td>13.0502 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>0.2610 mL</td>
<td>1.3050 mL</td>
<td>2.6100 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.1305 mL</td>
<td>0.6525 mL</td>
<td>1.3050 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: ≥ 2.5 mg/mL (3.26 mM); Clear solution  
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
   Solubility: 2.5 mg/mL (3.26 mM); Suspended solution; Need ultrasonic  
3. Add each solvent one by one: 10% DMSO >> 90% corn oil  
   Solubility: ≥ 2.5 mg/mL (3.26 mM); Clear solution

**BIOLOGICAL ACTIVITY**

**Description**  
ALC-0315 is an ionisable aminolipid that is responsible for mRNA compaction and aids mRNA cellular delivery and its cytoplasmic release through suspected endosomal destabilization. ALC-0315 can be used to form lipid nanoparticle (LNP) delivery vehicles. Lipid-Nanoparticles have been used in the research of mRNA COVID-19 vaccine\(^1\).

**In Vitro**  
ALC-0315 is used to form lipid nanoparticle for the research of vaccination\(^1\).  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.