Spirodiclofen

Cat. No.: HY-B0826  
CAS No.: 148477-71-8  
Molecular Formula: \( \text{C}_{21}\text{H}_{24}\text{Cl}_{2}\text{O}_{4} \)  
Molecular Weight: 411.32  
Target: Parasite  
Pathway: Anti-infection  
Storage: Powder -20°C 3 years  
In solvent -80°C 2 years  
In solvent -20°C 1 year

**SOLVENT & SOLUBILITY**

**In Vitro**  
DMSO: 120 mg/mL (291.74 mM; Need ultrasonic)  
Ethanol: 120 mg/mL (291.74 mM; Need ultrasonic)

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent</th>
<th>Concentration</th>
<th>Mass</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1 mg</td>
<td>5 mg</td>
</tr>
<tr>
<td></td>
<td>DMSO</td>
<td>1 mM</td>
<td>2.4312 mL</td>
</tr>
<tr>
<td></td>
<td>Ethanol</td>
<td>5 mM</td>
<td>0.4862 mL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 mM</td>
<td>0.2431 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: ≥ 3 mg/mL (7.29 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
   Solubility: 3 mg/mL (7.29 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil  
   Solubility: ≥ 3 mg/mL (7.29 mM); Clear solution
4. Add each solvent one by one: 10% EtOH >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
   Solubility: ≥ 3 mg/mL (7.29 mM); Clear solution
5. Add each solvent one by one: 10% EtOH >> 90% (20% SBE-β-CD in saline)  
   Solubility: 3 mg/mL (7.29 mM); Suspended solution; Need ultrasonic
6. Add each solvent one by one: 10% EtOH >> 90% corn oil  
   Solubility: ≥ 3 mg/mL (7.29 mM); Clear solution
**Description**

Spirodiclofen is a broad spectrum acaricide acting via lipid biosynthesis inhibition (LBI) with no cross resistance to currently available acaricides and with additional insecticidal properties.

**IC₅₀ & Target**

Mite

**REFERENCES**