Artemether

Cat. No.: HY-N0402
CAS No.: 71963-77-4
Molecular Formula: C₁₆H₂₆O₅
Molecular Weight: 298.37
Target: Parasite
Pathway: Anti-infection
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 (335.15 mM; Need ultrasonic)
H₂O : < 0.1 mg/mL (insoluble)

Preparing Stock Solutions

<table>
<thead>
<tr>
<th>Solvent</th>
<th>Mass Concentration</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td></td>
<td>3.3515 mL</td>
<td>16.7577 mL</td>
<td>33.5154 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td></td>
<td>0.6703 mL</td>
<td>3.3515 mL</td>
<td>6.7031 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td></td>
<td>0.3352 mL</td>
<td>1.6758 mL</td>
<td>3.3515 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 (8.38 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (8.38 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (8.38 mM); Clear solution

BIOLOGICAL ACTIVITY

Description
Artemether is an antimalarial for the treatment of resistant strains of falciparum malaria. Target:
Antiparasitic
Artemether is an antimalarial agent used to treat acute uncomplicated malaria. It is administered in combination with lumefantrine for improved efficacy. Artemether exhibits the highest activity against juvenile stages of the parasites, while adult worms are significantly less susceptible. There was no indication of neurotoxicity following repeated high doses of artemether given fortnightly for up to 5 months. Artemether-integrated with other
control strategies has considerable potential for reducing the current burden of schistosomiasis in different epidemiological settings [1]. There were remarkably inhibitory effects of artemeter on brain glioma growth and angiogenesis in SD rats and the mechanism that artemether inhibited brain glioma growth might be penetrating the blood-brain barrier and inhibiting angiogenesis [2].

REFERENCES
