Levofloxacin (hydrate)

Cat. No.: HY-B0330A
CAS No.: 138199-71-0
Molecular Formula: C₁₈H₂₀FN₃O₄ • 0.₅H₂O
Molecular Weight: 370.38
Target: Bacterial
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

H₂O : ≥ 50 mg/mL (135.00 mM)
DMSO : 8.33 mg/mL (22.49 mM; Need ultrasonic)
* "≥" means soluble, but saturation unknown.

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Concentration</th>
<th>Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td></td>
<td>2.6999 mL</td>
<td>13.4996 mL</td>
<td>26.9993 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td></td>
<td>0.5400 mL</td>
<td>2.6999 mL</td>
<td>5.3999 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td></td>
<td>0.2700 mL</td>
<td>1.3500 mL</td>
<td>2.6999 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: ≥ 0.83 mg/mL (2.24 mM); Clear solution

2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 0.83 mg/mL (2.24 mM); Clear solution

3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 0.83 mg/mL (2.24 mM); Clear solution

**BIOLOGICAL ACTIVITY**

Description

Levofloxacin hydrate is an antibacterial agent that inhibits the supercoiling activity of bacterial DNA gyrase, halting DNA replication. Target: Antibacterial. Levofloxacin reduced bacterial load compared with placebo by 4.9-fold (95% confidence interval, 1.4-25.7; P=0.02) at day 7 but had no effect at any point on any marker of neutrophilic airway inflammation. In patients with a baseline bacterial load of more than 10⁶ cfu/mL, levofloxacin treatment was associated with a 26.5% (95% confidence interval, 1.8%-51.3%; P=0.04) greater reduction in the percentage neutrophil count compared with placebo at day 7 [1]. Levofloxacin was found to significantly improve the clinical and
microbiological parameters in CP individuals [2]. A 30-day course of levofloxacin does not significantly improve BK viral load reduction or allograft function when used in addition to overall reduction of immunosuppression [3].

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REFERENCES

