Nanchangmycin

Cat. No.: HY-100528
CAS No.: 65101-87-3
Molecular Formula: C₄₇H₇₇NaO₁₄
Molecular Weight: 889.1
Target: Bacterial
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 : ≥ 30 mg/mL (33.74 mM)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

<table>
<thead>
<tr>
<th>Solvent Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>1.1247 mL</td>
<td>5.6237 mL</td>
<td>11.2473 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.2249 mL</td>
<td>1.1247 mL</td>
<td>2.2495 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.1125 mL</td>
<td>0.5624 mL</td>
<td>1.1247 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 (2.81 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (2.81 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Nanchangmycin, produced by Streptomyces nanchangensis NS3226, inhibits gram-positive bacteria. Nanchangmycin is a broad spectrum antiviral active against Zika virus.

IC₅₀ & Target

<table>
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<tr>
<th>Target</th>
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<tbody>
<tr>
<td>Bacteria[1]</td>
</tr>
<tr>
<td>Zika virus[2]</td>
</tr>
</tbody>
</table>

In Vitro

Nanchangmycin can be used as a growth promotant in poultry and to cure coccidiosis in chickens. Nanchangmycin is active against drug resistant strains of malaria[1]. Nanchangmycin as a potent inhibitor of Zika virus (ZIKV) entry.
across all cell types tested including physiologically relevant primary cells. Nanchangmycin potently reduces infection of all three strains of ZIKV across all three cell types. The IC$_{50}$s for infection are between 0.1 and 0.4 μM while Nanchangmycin has low toxicity in these ranges. In addition, DENV is inhibited by Nanchangmycin across cell types[2].

REFERENCES


Caution: Product has not been fully validated for medical applications. For research use only.

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