Thiamphenicol

Cat. No.: HY-B0479
CAS No.: 15318-45-3
Molecular Formula: C₁₂H₁₅Cl₂NO₅S
Molecular Weight: 356.22
Target: Bacterial
Pathway: Anti-infection

Storage:
- Powder: -20°C 3 years
- Powder: 4°C 2 years
- In solvent: -80°C 6 months
- In solvent: -20°C 1 month

Solvent & Solubility

In Vitro DMSO : ≥ 3.6 mg/mL (10.11 mM)

* “≥” means soluble, but saturation unknown.

Preparing Stock Solutions

<table>
<thead>
<tr>
<th>Solvent Concentration</th>
<th>Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>2.8073 mL</td>
<td>14.0363 mL</td>
<td>28.0725 mL</td>
<td></td>
</tr>
<tr>
<td>5 mM</td>
<td>0.5615 mL</td>
<td>2.8073 mL</td>
<td>5.6145 mL</td>
<td></td>
</tr>
<tr>
<td>10 mM</td>
<td>0.2807 mL</td>
<td>1.4036 mL</td>
<td>2.8073 mL</td>
<td></td>
</tr>
</tbody>
</table>

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description
Thiamphenicol is an antimicrobial antibiotic and a methyl-sulfonyl analogue of chloramphenicol. Target: Antibacterial

Thiamphenicol (also known as thiophenicol and dextrosulphenidol) is an antibiotic. It is the methyl-sulfonyl analogue of chloramphenicol and has a similar spectrum of activity, but is 2.5 to 5 times as potent. Like chloramphenicol, it is insoluble in water, but highly soluble in lipids. It is used in many countries as a veterinary antibiotic, but is available in China, Morocco and Italy for use in humans. Its main advantage over chloramphenicol is that it has never been associated with aplastic anaemia. Thiamphenicol is a derivative of chloramphenicol characterized by a spectrum comparable to that of the parent compound against multiresistant pathogens but showing satisfactory tolerability. Thiamphenicol showed a significant PAE (0.33 to 2.9h) on all pathogens studied and a powerful bactericidal effect against beta-lactamase-positive and -negative H. influenzae. These results indicate a good in vitro activity of thiamphenicol against difficult-to-treat multiply resistant pathogens [1, 2].

REFERENCES

www.MedChemExpress.com