Brivudine

Cat. No.: HY-13578
CAS No.: 69304-47-8
Molecular Formula: C₁₁H₁₃BrN₂O₅
Molecular Weight: 333.14
Target: CMV
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: ≥ 330 mg/mL (990.57 mM)
*≥* means soluble, but saturation unknown.

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Concentration</th>
<th>Mass (1 mg)</th>
<th>Mass (5 mg)</th>
<th>Mass (10 mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>3.0017 mL</td>
<td>15.0087 mL</td>
<td>30.0174 mL</td>
<td></td>
</tr>
<tr>
<td>5 mM</td>
<td>0.6003 mL</td>
<td>3.0017 mL</td>
<td>6.0035 mL</td>
<td></td>
</tr>
<tr>
<td>10 mM</td>
<td>0.3002 mL</td>
<td>1.5009 mL</td>
<td>3.0017 mL</td>
<td></td>
</tr>
</tbody>
</table>

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

**BIOLOGICAL ACTIVITY**

**Description**
Brivudine is a thymidine analogue with antiviral activity, indicated for the early treatment of acute herpes zoster.

**In Vitro**
Brivudine is an analog of thymidine, and is incorporated into the viral DNA. It blocks the action of DNA polymerases, thus inhibiting viral replication. It has a stronger antiviral effect against the varicella-zoster virus compared with reference compounds such as aciclovir or penciclovir[1]. It has high, selective activity against varicella zoster virus (VZV), inhibiting VZV replication, possibly through competitive inhibition of viral DNA polymerase, or by acting as an alternative substrate to deoxythymidine triphosphate, causing viral DNA strand breakage[2].

**In Vivo**
At a dose of 125 mg once daily, brivudine has proved to be superior to aciclovir with respect to reducing the period of new blister production, and has shortened the duration of post-herpetic neuralgia[1].

**REFERENCES**