Pamiparib

Cat. No.: HY-104044
CAS No.: 1446261-44-4
Molecular Formula: C₁₆H₁₅FN₄O
Molecular Weight: 298.31
Target: PARP
Pathway: Cell Cycle/DNA Damage; Epigenetics
Storage:
- Powder:
  - -20°C: 3 years
  - 4°C: 2 years
  - In solvent:
    - -80°C: 6 months
    - -20°C: 1 month

SOLVENT & SOLUBILITY

<table>
<thead>
<tr>
<th>SOLVENT &amp; CONCENTRATION</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMSO : 62.5 mg/mL (209.51 mM; Need ultrasonic)</td>
<td></td>
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<tr>
<td>Preparing Stock Solutions</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1 mM</td>
<td>3.3522 mL</td>
<td>16.7611 mL</td>
<td>33.5222 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.6704 mL</td>
<td>3.3522 mL</td>
<td>6.7044 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.3352 mL</td>
<td>1.6761 mL</td>
<td>3.3522 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: ≥ 2.25 mg/mL (7.54 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.25 mg/mL (7.54 mM); Clear solution

BIOLOGICAL ACTIVITY

Description
Pamiparib (BGB-290) is an orally active, potent, highly selective PARP inhibitor, with IC₅₀ values of 0.9 nM and 0.5 nM for PARP1 and PARP2, respectively. Pamiparib has oral bioavailability, potent PARP trapping, and capability to penetrate the brain, and can be used for the treatment of various cancers including the solid tumor[1][2].

IC₅₀ & Target
PARP

In Vitro
Pamiparib shows potent DNA-trapping activity with an IC₅₀ of 13 nM. In the cellular assays, Pamiparib inhibits intracellular PAR formation with an IC₅₀ of 0.24 nM. Tumor cell lines with homologous recombination defects are profoundly sensitive to Pamiparib. Pamiparib is highly active both in vitro and in vivo in BRCA mutant tumors[3].
In Vivo

Pamiparib suppresses PARP activity in patient-derived glioblastoma multiforme and small-cell-lung cancer xenografts, and potentiates the effects of Temozolamide. In vivo activities of Pamiparib, and its combination activity with chemotherapies in patient biopsy derived small cell lung cancer (SCLC) xenograft models.[4].

REFERENCES


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