Devimistat

Cat. No.: HY-15453
CAS No.: 95809-78-2
Molecular Formula: \( C_{22}H_{28}O_2S_2 \)
Molecular Weight: 388.59
Target: Apoptosis; Mitochondrial Metabolism
Pathway: Apoptosis; Metabolic Enzyme/Protease
Storage: Powder -20°C 3 years
In solvent -80°C 2 years
-20°C 1 year

SOLVENT & SOLUBILITY

In Vitro
DMSO : 100 mg/mL (257.34 mM; Need ultrasonic)

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Concentration</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td>2.5734 mL</td>
<td>12.8670 mL</td>
<td>25.7341 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>0.5147 mL</td>
<td>2.5734 mL</td>
<td>5.1468 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.2573 mL</td>
<td>1.2867 mL</td>
<td>2.5734 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: \( \geq 2.08 \text{ mg/mL (5.35 mM)} \); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: \( \geq 2.08 \text{ mg/mL (5.35 mM)} \); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: \( \geq 2.08 \text{ mg/mL (5.35 mM)} \); Clear solution
4. Add each solvent one by one: 2% DMSO >> 40% PEG300 >> 5% Tween-80 >> 53% saline
   Solubility: 2 mg/mL (5.15 mM); Suspended solution; Need ultrasonic
5. Add each solvent one by one: 2% DMSO >> 98% (20% SBE-β-CD in saline)
   Solubility: \( \geq 2 \text{ mg/mL (5.15 mM)} \); Clear solution

BIological ACTIVITY

Description
Devimistat (CPI-613) is a mitochondrial metabolism inhibitor. Devimistat is a lipoic acid antagonist that abrogates mitochondrial energy metabolism to induce apoptosis in various cancer cells\[^1\].
<table>
<thead>
<tr>
<th>IC₅₀ &amp; Target</th>
<th>mitochondrial metabolism[1]</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Vitro</td>
<td>Devimistat induces apoptosis of GPM-2 gastric cancer cells. Devimistat targets the altered form of mitochondrial energy metabolism utilized by tumor cells. The change in mitochondrial enzyme activities and cellular redox status induced by devimistat leads to cell death, including apoptosis[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</td>
</tr>
</tbody>
</table>

**CUSTOMER VALIDATION**

- Signal Transduct Target Ther. 2022 Sep 1;7(1):303.
- J Immunother Cancer. 2023 Sep;11(9):e007146.

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**REFERENCES**


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

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