Pitavastatin Calcium

Cat. No.: HY-B0144
CAS No.: 147526-32-7
Molecular Formula: C₂₅H₂₃FNO₄ . ½ Ca
Molecular Weight: 440.49
Target: HMG-CoA Reductase (HMGCR); Autophagy; Apoptosis; Mitophagy
Pathway: Metabolic Enzyme/Protease; Autophagy; Apoptosis
Storage: 4°C, protect from light, stored under nitrogen
* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)

**SOLVENT & SOLUBILITY**

**In Vitro**

DMSO : ≥ 50 mg/mL (113.51 mM)
* "≥" means soluble, but saturation unknown.

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Mass</th>
<th>Solvent Concentration</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1 mM</td>
<td>2.2702 mL</td>
<td>11.3510 mL</td>
<td>22.7020 mL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 mM</td>
<td>0.4540 mL</td>
<td>2.2702 mL</td>
<td>4.5404 mL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 mM</td>
<td>0.2270 mL</td>
<td>1.1351 mL</td>
<td>2.2702 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 (5.68 mM); Clear solution

2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.68 mM); Clear solution

3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.68 mM); Clear solution

**BIOLOGICAL ACTIVITY**

**Description**

Pitavastatin Calcium (NK-104 hemicalcium) is a potent hydroxymethylglutaryl-CoA (HMG-CoA) reductase inhibitor. Pitavastatin Calcium (NK-104 hemicalcium) inhibits cholesterol synthesis from acetic acid with an IC₅₀ of 5.8 nM in HepG2 cells. Pitavastatin Calcium is an efficient hepatocyte low-density lipoprotein-cholesterol (LDL-C) receptor inducer. Anti-cancer activity[1][2][3].

**In Vitro**

Pitavastatin Calcium inhibits the growth of a panel of ovarian cancer cells, including those considered most likely to
represent HGSOC, grown as a monolayers (IC$_{50}$ = 0.4-5 μM) or as spheroids (IC$_{50}$=0.6-4 μM)$^{[3]}$.

Pitavastatin Calcium (1 μM; 48 hours) induces apoptosis, evidenced by the increased activity of executioner caspases-3,7 as well as caspase-8 and caspase-9 in Ovcar-8 cells and Ovcar-3 cells$^{[3]}$.

Pitavastatin (1 μM, 48 hours) caused PARP cleavage in Ovcar-8 cells$^{[3]}$.

**Western Blot Analysis$^{[3]}$**

<table>
<thead>
<tr>
<th>Cell Line:</th>
<th>Ovcar-8 cells</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentration:</td>
<td>1 μM</td>
</tr>
<tr>
<td>Incubation Time:</td>
<td>48 hours</td>
</tr>
<tr>
<td>Result:</td>
<td>Induced PARP cleavage.</td>
</tr>
</tbody>
</table>

**In Vivo**

Pitavastatin Calcium (59 mg/kg; p.o.; twice daily for 28 days) caused significant tumour regression$^{[3]}$.

<table>
<thead>
<tr>
<th>Animal Model:</th>
<th>4 week old female NCR Nu/Nu female mice (bearing Ovcar-4 tumours)$^{[3]}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dosage:</td>
<td>59 mg/kg</td>
</tr>
<tr>
<td>Administration:</td>
<td>p.o.; twice daily for 28 days</td>
</tr>
<tr>
<td>Result:</td>
<td>Caused significant tumour regression.</td>
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</tbody>
</table>

**REFERENCES**


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