Felodipine

Cat. No.: HY-B0309  
CAS No.: 72509-76-3  
Molecular Formula: C₁₈H₁₉Cl₂NO₄  
Molecular Weight: 384.25  
Target: Calcium Channel; Autophagy  
Pathway: Membrane Transporter/Ion Channel; Autophagy  
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 : 100 mg/mL (260.25 mM; Need ultrasonic)  
H₂O : < 0.1 mg/mL (insoluble)

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Concentration</th>
<th>Mass 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></td>
<td>2.6025 mL</td>
<td>13.0124 mL</td>
<td>26.0247 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td></td>
<td>0.5205 mL</td>
<td>2.6025 mL</td>
<td>5.2049 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td></td>
<td>0.2602 mL</td>
<td>1.3012 mL</td>
<td>2.6025 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 (6.51 mM); Clear solution

2. Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.5 mg/mL (6.51 mM); Clear solution

BIOLOGICAL ACTIVITY

Felodipine is a long-acting 1,4-dihydropyridine calcium channel blocker. Target: Calcium Channel  
Felodipine is a long-acting 1,4-dihydropyridine calcium channel blocker (CCB). It acts primarily on vascular smooth muscle cells by stabilizing voltage-gated L-type calcium channels in their inactive conformation. Felodipine significantly relaxes KCl-contracted porcine coronary segments by blocking the Ca2+ channels, displaying ~50 times more potent than nifedipine (IC50 of ~8 nM) and ~430 times than verapamil (IC50 of ~65 nM) [1]. Felodipine significantly induces the transcription and secretion of IL-6 and IL-8 with ED50 values of 5.8 nM and 5.3 nM in primary human VSMC and lung fibroblasts, respectively, while propranolol or furosemide fails to affect the expression of the two IL genes [2]. Felodipine blocks the muscarinic receptor-mediated (carbachol) Ca2+-dependent contraction of guinea pig ileum.
longitudinal smooth muscle (GPILSM) with an IC50 of 1.45 nM [3].

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**REFERENCES**


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

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