Tilianin

Cat. No.: HY-N2555
CAS No.: 4291-60-5
Molecular Formula: C₂₂H₂₂O₁₀
Molecular Weight: 446.4
Target: Others
Pathway: Others
Storage: 4°C, protect from light

* In solvent: -80°C, 6 months; -20°C, 1 month (protect from light)

**SOLVENT & SOLUBILITY**

**In Vitro**
DMSO: 50 mg/mL (112.01 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>2.2401 mL</td>
<td>11.2007 mL</td>
<td>22.4014 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>0.4480 mL</td>
<td>2.2401 mL</td>
<td>4.4803 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.2240 mL</td>
<td>1.1201 mL</td>
<td>2.2401 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 >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (4.66 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (4.66 mM); Clear solution

**BIOLOGICAL ACTIVITY**

**Description**
Tilianin is an active flavonoid glycoside found in many medical plants, with potential anti-hypertensive, myocardial-protective, anti-diabetic, anti-hyperlipidemic, anti-inflammatory and antioxidant effects\(^1\)\(^2\)\(^3\).

**In Vitro**
Tilianin (10 μM, 20 μM) reduced secretion of LPS (1 μg/mL)-induced proinflammatory cytokine in RAW264.7 macrophage cell \(^2\).
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**In Vivo**
Tilianin (10 mg/kg; i.p.) is a potential agent for ameliorating LPS-induced acute lung injury (ALI)\(^2\).
Tilianin shows \(T_{\text{max}}=10.8\) min, \(C_{\text{max}}=176.9\) nmol/L, \(\text{AUC}_{0-\infty}=17.4\) min*μmol/L in mice\(^3\).
MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<table>
<thead>
<tr>
<th>Animal Model</th>
<th>C57BL/6 mouse[^2]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dosage</td>
<td>10 mg/kg</td>
</tr>
<tr>
<td>Administration</td>
<td>Intraperitoneal injection</td>
</tr>
<tr>
<td>Result</td>
<td>Attenuated infiltration of macrophages and histopathological changes and improved inflammation.</td>
</tr>
</tbody>
</table>

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<tr>
<th>Animal Model</th>
<th>Male FVB mice (6-10 weeks)[^3]</th>
</tr>
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<tbody>
<tr>
<td>Dosage</td>
<td>10 mg/kg (Pharmacokinetic Analysis)</td>
</tr>
<tr>
<td>Administration</td>
<td>Oral gavage</td>
</tr>
<tr>
<td>Result</td>
<td>$T_{\text{max}}$ (10.8 min), $C_{\text{max}}$ (176.9 nmol/L), $AUC_{0-\infty}$ (17.4 min*μmol/L).</td>
</tr>
</tbody>
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**REFERENCES**

