Calycosin-7-O-β-D-glucoside

Cat. No.: HY-N0520
CAS No.: 20633-67-4
Molecular Formula: C_{22}H_{22}O_{10}
Molecular Weight: 446.4
Target: Reactive Oxygen Species
Pathway: Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB

Storage:
- Powder: -20°C, 3 years; 4°C, 2 years
- In solvent: -80°C, 2 years; -20°C, 1 year

SOLVENT & SOLUBILITY

In Vitro
DMSO: ≥ 100 mg/mL (224.01 mM)
* "≥" means soluble, but saturation unknown.

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>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 >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (5.60 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.60 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.60 mM); Clear solution

BIOLOGICAL ACTIVITY

Description
Calycosin-7-O-β-D-glucoside is an isoflavone isolated from Astragali Radix. Calycosin-7-O-β-D-glucoside has variety of biological activities, such as neuroprotective, cardioprotection, anti-inflammation, and antioxidative stress effects\(^1\)\(^2\).

In Vitro
Calycosin-7-O-β-D-glucoside (2 μM; 6 hours) remarkably inhibits the expression and activities of MMPs, and secures the expression of cav-1 and tight junction proteins in the microvessels isolated from ischemic rat cortex\(^1\).

MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo

Calycosin-7-O-β-D-glucoside (intraperitoneal injection; 26.8 mg/kg; 14 days) significantly reduces infarct volume, histological damage and BBB permeability in the in vivo MCAO ischemia-reperfusion rat model[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

<table>
<thead>
<tr>
<th>Animal Model:</th>
<th>Middle cerebral artery occlusion (MCAO) male adult Sprague-Dawley rats[1]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dosage:</td>
<td>26.8 mg/kg</td>
</tr>
<tr>
<td>Administration:</td>
<td>Intraperitoneal injection; 26.8 mg/kg; 14 days</td>
</tr>
<tr>
<td>Result:</td>
<td>Exhibited neuroprotective effects in rats.</td>
</tr>
</tbody>
</table>

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES
