Geniposide

Cat. No.: HY-N0009
CAS No.: 24512-63-8
Molecular Formula: C₁₇H₂₄O₁₀
Molecular Weight: 388.37
Target: Amyloid-β; Influenza Virus
Pathway: Neuronal Signaling; Anti-infection
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 (257.49 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>1 mM</td>
<td></td>
<td>2.5749 mL</td>
<td>12.8743 mL</td>
<td>25.7486 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td></td>
<td>0.5150 mL</td>
<td>2.5749 mL</td>
<td>5.1497 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td></td>
<td>0.2575 mL</td>
<td>1.2874 mL</td>
<td>2.5749 mL</td>
</tr>
</tbody>
</table>

In Vivo
1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.75 mg/mL (7.08 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.75 mg/mL (7.08 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.75 mg/mL (7.08 mM); Clear solution

BIOLOGICAL ACTIVITY

Description
Geniposide is an iridoid glucoside extracted from Gardenia jasminoides Ellis fruits; exhibits a variety of biological activities such as anti-diabetic, antioxidative, antiproliferative and neuroprotective activities.

In Vitro
Geniposide exhibits a variety of activities, such as on antithrombosis, anti-inflammation, anti-diabetes, anti-atherosclerosis, antidepression, healing Alzheimer’s disease (AD), anti-hypertension, toxicology, and untoward reaction are summarized[1]. Geniposide markedly declines the production of IL-8, IL-1β and MCP-1 in OGD-induced
<table>
<thead>
<tr>
<th>Brain Microvascular Endothelial Cells</th>
<th>The expression of P2Y14 receptor is significantly down-regulated, the phosphorylation of RAF-1, MEK1/2, ERK1/2 are suppressed.</th>
</tr>
</thead>
</table>

**In Vivo**

Geniposide (200 and 400 mg/kg) significantly decreases the blood glucose, insulin and TG levels in diabetic mice in a dose-dependent manner. This compound also decreases the expression of GP and G6Pase at mRNA and immunoreactive protein levels, as well as enzyme activity. Geniposide (20.0, 40.0, or 80 mg/kg) significantly reverses the excessive, alcohol-induced elevation in both serum ALT/AST and hepatic LPO levels. Geniposide upregulates the expression of heme oxygenase-1 (HO-1) to attenuate the cell apoptosis induced by 3-morpholinosydnonimine hydrochloride (SIN-1) in primary cultured hippocampal neurons. Geniposide inhibits photochemistry-induced thromboembolism model in vivo. Geniposide are very effective depressants on NF-κB by interrupting IκB degradation.

**PROTOCOL**

**Cell Assay**

The third passages of brain microvascular endothelial cells (BMECs) are used for the experiment. The BMECs are divided into four groups: (1) normal control group: the normal cultured BMECs without treatment; (2) OGD group: the BMECs injured by OGD according to the above method; (3) geniposide group: the OGD-injured BMECs treated with 33.2 μg/mL geniposide for 6 h; (4) PTX group: the OGD-injured BMECs administrated with 100 ng/mL PTX. PTX, known as an inhibitor of G coupled receptor is used to assess the activation of P2Y14 receptor induced by OGD in this experiment. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**Animal Administration**

Mice: Type 2 diabetic mice, induced by a high-fat diet and streptozotocin injection, are treated with or without geniposide for 2 weeks. Blood glucose levels are monitored by a glucometer. Insulin concentrations are analyzed by the ELISA method. Total cholesterol (TC) and triglyceride (TG) levels are measured using Labassay kits. Activities of hepatic GP and G6Pase are measured by glucose-6-phosphate dehydrogenase-coupled reaction. Real-time RT-PCR and Western blotting are used to determine the mRNA and protein levels of both enzymes. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**REFERENCES**


