Notoginsenoside R1

Cat. No.: HY-N0615
CAS No.: 80418-24-2
Molecular Formula: C₄₇H₈₀O₁₈
Molecular Weight: 933.13
Target: Amyloid-β
Pathway: Neuronal Signaling

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 (107.17 mM)

*“≥” means soluble, but saturation unknown.

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Concentration</th>
<th>Mass: 1 mg</th>
<th>Mass: 5 mg</th>
<th>Mass: 10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td>1.0717 mL</td>
<td>5.3583 mL</td>
<td>10.7166 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>0.2143 mL</td>
<td>1.0717 mL</td>
<td>2.1433 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.1072 mL</td>
<td>0.5358 mL</td>
<td>1.0717 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: ≥ 3 mg/mL (3.21 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 3 mg/mL (3.21 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 3 mg/mL (3.21 mM); Clear solution

BIOLOGICAL ACTIVITY

Notoginsenoside R1, the main bioactive component in panaxnotoginseng, is reported to have some neuronal protective, antihypertensive effects. IC50 value: Target: In vitro: Notoginsenoside R1 significantly reduce blood pressure in spontaneously hypertensive rats and induce nitric oxide generation through increasing the phosphorylation of iNOS. Notoginsenoside R1 reduces the caudal blood pressure of spontaneously hypertensive rats through induction of iNOS regulated by long non-coding RNA AK094457 [1]. The mice with notoginsenoside R1
treatment showed significant amelioration in the cognitive function and increased choline acetyl transferase expression, as compared to the vehicle treated mice. Notoginsenoside R1 treatment inhibited Aβ accumulation and increased insulin degrading enzyme expression in both APP/PS1 mice and N2a-APP695sw cells [2]. In Notoginsenoside R1 treated rats, expression of TGF-β1 and Smad3 at each time point was down-regulated, with statistical significance (P<0.05) compared with that in the NDMA group [3].

REFERENCES


[2]. Li Zhi, et al. Protective Effect of Notoginsenoside R1 on an APP/PS1 Mouse Model of Alzheimer's Disease by Up-Regulating Insulin Degrading Enzyme and Inhibiting Aβ Accumulation. Protective Effect of Notoginsenoside R1 on an APP/PS1 Mouse Model of Alzheimer's Disease by Up-Regulating Insulin Degrading Enzyme and Inhibiting Aβ Accumulation, Volume 14, Number 3, April 2015, pp. 360-369(10)