Schisandrin B

Cat. No.: HY-N0089  
CAS No.: 61281-37-6  
Molecular Formula: \( \text{C}_{23}\text{H}_{28}\text{O}_{6} \)  
Molecular Weight: 400.46  
Target: Autophagy; Reactive Oxygen Species  
Pathway: Autophagy; Immunology/Inflammation; Metabolic Enzyme/Protease; NF-\( \kappa \)B  
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 : 14.29 mg/mL (35.68 mM; Need ultrasonic)  
\( \text{H}_2\text{O} \) : < 0.1 mg/mL (insoluble)

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>2.4971 mL</td>
<td>12.4856 mL</td>
<td>24.9713 mL</td>
<td></td>
</tr>
<tr>
<td>5 mM</td>
<td>0.4994 mL</td>
<td>2.4971 mL</td>
<td>4.9943 mL</td>
<td></td>
</tr>
<tr>
<td>10 mM</td>
<td>0.2497 mL</td>
<td>1.2486 mL</td>
<td>2.4971 mL</td>
<td></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: ≥ 1.43 mg/mL (3.57 mM); Clear solution  
2. Add each solvent one by one: 10% DMSO >> 90% corn oil  
   Solubility: ≥ 1.43 mg/mL (3.57 mM); Clear solution

**BIOLOGICAL ACTIVITY**

**Description**

Schisandrin B (\( \gamma \)-Schisandrin) is a dibenzocyclooctadiene derivative isolated from Fructus Schisandrae, has been shown to produce antioxidant effect on rodent liver and heart. IC50 value: Target: in vitro: Schisandrin B exhibits anti-inflammatory activity through modulation of the redox-sensitive transcription factors Nrf2 and NF-\( \kappa \)B. SB inhibited mitogen-induced proliferation and cytokine secretion by lymphocytes [1]. Sch B can protect neuronal cells against oxidative challenge, presumably by functioning as a hormetic agent to sustain cellular redox homeostasis and mitoenergetic capacity in neuronal cells [2]. Sch B exerted significant neuroprotective effects against microglial-mediated inflammatory injury in microglia-neuron co-cultures. Sch B significantly downregulated pro-inflammatory cytokines, including nitrite oxide (NO), tumor necrosis factor (TNF-\( \alpha \)), prostaglandin E(2) (PGE(2)), interleukin (IL)-1\( \beta \) and IL-6 [3]. Sch B could inhibit TGF-\( \beta \) induced EMT of 4T1 cells and of primary human breast cancer cells [4].

in vivo: Similar anti-inflammatory effects of SB on lymphocyte
proliferation and cytokine secretion were also observed in vivo [1]. Treatment with Sch B in CsA-treated mice significantly suppressed the elevation of blood urea nitrogen (BUN) and serum creatinine levels and attenuated the histopathological changes. Additionally, Sch B also decreased renal MDA levels and increased GSH levels in CsA-treated mice [5].

**REFERENCES**


