Isorhynchophylline

**Cat. No.:** HY-N0766  
**CAS No.:** 6859-01-4  
**Molecular Formula:** \( \text{C}_{22}\text{H}_{28}\text{N}_{2}\text{O}_{4} \)  
**Molecular Weight:** 384.47  
**Target:** Others  
**Pathway:** Others  
**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 (260.10 mM; Need ultrasonic)  
- **H\(_2\)O**: < 0.1 mg/mL (insoluble)

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>2.6010 mL</td>
<td>13.0049 mL</td>
<td>26.0098 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.5202 mL</td>
<td>2.6010 mL</td>
<td>5.2020 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.2601 mL</td>
<td>1.3005 mL</td>
<td>2.6010 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: ≥ 2.75 mg/mL (7.15 mM); Clear solution  
- 2. Add each solvent one by one: 10% DMSO >> 90% corn oil  
  Solubility: ≥ 2.75 mg/mL (7.15 mM); Clear solution

### BIOLOGICAL ACTIVITY

**Description**
Isorhynchophylline (IRN), an alkaloid isolated from Uncaria rhynchophylla, possesses the effects of lowered blood pressure, vasodilatation and protection against ischemia-induced neuronal damage. IC50 value:  
- **Target:** In vitro: Isorhynchophylline concentration-dependently inhibited the platelet-derived growth factor (PDGF)-BB-induced proliferation of PASMCs. Fluorescence-activated cell-sorting analysis showed that isorhynchophylline caused G0/G1 phase cell cycle arrest [2]. Isorhynchophylline can significantly attenuate the cardiomyocyte hypertrophy induced by AngII [3]. **In vivo:** Isorhynchophylline significantly improved spatial learning and memory function in the D-gal-treated mice. Isorhynchophylline significantly increased the level of glutathione (GSH) and the activities of superoxide dismutase (SOD) and catalase (CAT), while decreased the level of malondialdehyde (MDA) in the brain tissues of the
D-gal-treated mice [1]. Isorhynchophylline prevented monocrotaline induced pulmonary arterial hypertension in rats, as assessed by right ventricular (RV) pressure, the weight ratio of RV to (left ventricular+septum) and RV hypertrophy. Isorhynchophylline significantly attenuated the percentage of fully muscularized small arterioles, the medial wall thickness, and the expression of smooth muscle α-actin (α-SMA) and proliferating cell nuclear antigen (PCNA) [2].

REFERENCES

