Icilin

Cat. No.: HY-11062
CAS No.: 36945-98-9
Molecular Formula: C₁₆H₁₃N₃O₄
Molecular Weight: 311.29
Target: TRP Channel
Pathway: Membrane Transporter/Ion Channel; 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: ≥ 54 mg/mL (173.47 mM)
H₂O: < 0.1 mg/mL (insoluble)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

<table>
<thead>
<tr>
<th>Concentration</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>3.2124 mL</td>
<td>16.0622 mL</td>
<td>32.1244 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.6425 mL</td>
<td>3.2124 mL</td>
<td>6.4249 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.3212 mL</td>
<td>1.6062 mL</td>
<td>3.2124 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 (8.03 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Icilin(AG 3-5) is a synthetic super-agonist of TRPM8 ion channel. IC50 value: Target: TRPM8 in vitro: icilin, a super-cooling agent, down-regulated the expression of cell cycle signature genes and caused G1 arrest in PC-3 prostate cancer cells. Icilin affected cell cycle-related transcriptional modules and identified E2F1 transcription factor as a target master regulator of icilin. Icilin reduced the activity and expression levels of E2F1 [1]. Icilin concentration-response curves were significantly shifted to the right when pH was lowered from 7.3 to 6.9, whereas those with menthol were unaltered in solutions of pH 6.1 [2]. Icilin modulated the expression level of various cell cycle regulators at transcription or post-translational levels. In addition, icilin activated JNK and p38 kinase pathways, but not ERK [4]. In vivo: Rats injected with icilin (0.5, 1, 2.5, 5mg/kg, i.p.) displayed dose-related WDS that were inhibited by pretreatment with a fixed dose of clonidine (0.15 mg/kg, s.c.). Shaking behavior caused by a fixed dose (2.5mg/kg) of
icilin was also inhibited in a dose-related manner by clonidine pretreatment (0.03-0.15 mg/kg, s.c.) and reduced by clonidine posttreatment (0.15 mg/kg, s.c.) [3].

REFERENCES


Caution: Product has not been fully validated for medical applications. For research use only.
Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA