tCFA15

Cat. No.: HY-104031  
CAS No.: 220757-88-0  
Molecular Formula: C_{24}H_{44}O_{2}  
Molecular Weight: 364.6  
Target: Notch  
Pathway: Stem Cell/Wnt  
Storage: Please store the product under the recommended conditions in the COA.

**SOLVENT & SOLUBILITY**

**In Vitro**

<table>
<thead>
<tr>
<th>Solvent</th>
<th>Mass (mg/mL)</th>
<th>Concentration (mM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMSO</td>
<td>130 (356.56 mM)</td>
<td>Need ultrasonic</td>
</tr>
<tr>
<td>H_{2}O</td>
<td>&lt; 0.1 (insoluble)</td>
<td></td>
</tr>
</tbody>
</table>

**Preparing Stock Solutions**

<table>
<thead>
<tr>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>2.7427 mL</td>
<td>13.7137 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.5485 mL</td>
<td>2.7427 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.2743 mL</td>
<td>1.3714 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: ≥ 2.17 mg/mL (5.95 mM); Clear solution

2. Add each solvent one by one: 10% DMSO >> 90% corn oil  
   Solubility: ≥ 2.17 mg/mL (5.95 mM); Clear solution

**BIOLOGICAL ACTIVITY**

**Description**

tCFA15 is a trimethyl cyclohexenonic long chain fatty alcohol containing 15 carbon atoms on the side chain, promotes the differentiation of neurons, and may regulates Notch signaling.

**IC_{50} & Target**

Notch1^{[1]}

**In Vitro**

tCFA15 (10 nM-1 μM) dose-dependently affects the differentiation of neural stem cell-derived neurospheres by promoting neurons at the expense of astrocytes, and such effect is via Notch1. tCFA15 (1 μM) specifically decreases the level of Notch1 mRNA in spheres, and such an effect is also observed in decreases Notch1 expression in neuronal and glial cell cultures^{[1]}. tCFA15 stimulates arginine vasopressin secretion in nerve terminals of the neurohypophysis^{[2]}.
REFERENCES
