**Flecainide acetate**

Cat. No.: HY-17429  
CAS No.: 54143-56-5  
Molecular Formula: \(\text{C}_{19}\text{H}_{24}\text{F}_{6}\text{N}_{2}\text{O}_{5}\)  
Molecular Weight: 474.39  
Target: Sodium Channel  
Pathway: Membrane Transporter/Ion Channel  
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: 50 mg/mL (105.40 mM; Need ultrasonic)  
\(\text{H}_{2}\text{O}: 20\text{ mg/mL (42.16 mM; Need ultrasonic)}\)

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Solvent</th>
<th>Mass (1 mg)</th>
<th>Mass (5 mg)</th>
<th>Mass (10 mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>DMSO</td>
<td>2.1080 mL</td>
<td>10.5399 mL</td>
<td>21.0797 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>DMSO</td>
<td>0.4216 mL</td>
<td>2.1080 mL</td>
<td>4.2159 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>DMSO</td>
<td>0.2108 mL</td>
<td>1.0540 mL</td>
<td>2.1080 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 (5.27 mM); Clear solution  
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.5 mg/mL (5.27 mM); Clear solution  
3. Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.5 mg/mL (5.27 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Flecainide acetate (R-818) is a class 1C antiarrhythmic drug especially used for the management of supraventricular arrhythmia; works by blocking the Nav1.5 sodium channel in the heart, causing prolongation of the cardiac action potential.

#### IC₅₀ & Target

Nav1.5 channel

#### In Vitro

Flecainide is a class 1C antiarrhythmic drug especially used for the management of supraventricular arrhythmia. Flecainide...
works by blocking the Nav1.5 sodium channel in the heart, causing prolongation of the cardiac action potential. In vitro: Under the current-clamp condition, flecainide (1-100 microM) prolonged the action potential duration at both the early and the late phases of repolarization in a concentration-dependent manner without affecting the resting membrane potential [1]. At a holding potential (HP) of -120 mV, flecainide use-dependently blocked WT and G1306E I(\text{Na}) equally but was more potent on R1448C channels. For WT, the extent of block depended on a holding voltage more negative than the activation threshold, being greater at -90 mV as compared to -120 and -180 mV [2].

In vivo: Flecainide (80-130 mg/m(2) orally) resulted in termination of the tachycardia in all 8 patients. Acute pharmacological termination of arrhythmia occurred with oral flecainide loading in 1 and temporarily with intravenous esmolol loading in 1 patient. Adjuvant therapy in form of propranolol was used in 5 and digoxin in 2 [3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES
