**Icenticaftor**

**Cat. No.:** HY-109177

**CAS No.:** 1334546-77-8

**Molecular Formula:** \( \text{C}_{12}\text{H}_{13}\text{F}_{6}\text{N}_{3}\text{O}_{3} \)

**Molecular Weight:** 361.24

**Target:** CFTR

**Pathway:** Membrane Transporter/Ion Channel

**Storage:**
- **Powder:** -20°C for 3 years, 4°C for 2 years
- **In solvent:** -80°C for 6 months, -20°C for 1 month

**SOLVENT & SOLUBILITY**

**In Vitro**

DMSO: 150 mg/mL (415.24 mM; ultrasonic and warming and heat to 60°C)

<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>2.7682 mL</td>
<td>13.8412 mL</td>
<td>27.6824 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.5536 mL</td>
<td>2.7682 mL</td>
<td>5.5365 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.2768 mL</td>
<td>1.3841 mL</td>
<td>2.7682 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: 4.25 mg/mL (11.77 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 4.25 mg/mL (11.77 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 4.25 mg/mL (11.77 mM); Clear solution

**BIOLOGICAL ACTIVITY**

**Description**

Icenticaftor (QB251) is an orally active CFTR channel potentiator, with \( \text{EC}_{50} \)s of 79 nM and 497 nM for F508del and G551D CFTR, respectively. Icenticaftor can be used for chronic obstructive pulmonary disease (COPD) and cystic fibrosis research.[1]

**IC\textsubscript{50} & Target**

\( \text{IC}_{50} \): 79 nM (F508del CFTR) and 497 nM (G551D CFTR)[1]

**In Vitro**

Icenticaftor (QB251), an orally bioavailable small molecule CFTR potentiator, can restore CFTR function in specific CFTR genotypes as well as wild-type CFTR.[2]
In Vivo

In Sprague-Dawley rats, the pharmacokinetic profile of Icenticaftor is established. After oral administration at a dose of 3 mg/kg, the oral bioavailability is 90%, and $AUC_{last}$ is 20635 nmol/L•h\(^1\).[1]

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

REFERENCES
