**Itacitinib**

**Cat. No.:** HY-16997  
**CAS No.:** 1334298-90-6  
**Molecular Formula:** C₂₆H₂₃F₄N₉O  
**Molecular Weight:** 553.51  
**Target:** JAK  
**Pathway:** Epigenetics; JAK/STAT Signaling; Stem Cell/Wnt  
**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: ≥ 30 mg/mL (54.20 mM)  
* "≥" means soluble, but saturation unknown.

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Concentration</th>
<th>Mass 1 mg</th>
<th>Mass 5 mg</th>
<th>Mass 10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td>1.8067 mL</td>
<td>9.0333 mL</td>
<td>18.0665 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>0.3613 mL</td>
<td>1.8067 mL</td>
<td>3.6133 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.1807 mL</td>
<td>0.9033 mL</td>
<td>1.8067 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 (4.52 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
   Solubility: ≥ 2.5 mg/mL (4.52 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil  
   Solubility: ≥ 2.5 mg/mL (4.52 mM); Clear solution

### BIOLOGICAL ACTIVITY

**Description**

Itacitinib (INCB039110) is an orally active and selective inhibitor of JAK1 with an IC₅₀ of 2 nM for human JAK1. Itacitinib shows >20-fold selectivity for JAK1 over JAK2 and >100-fold over JAK3 and TYK2; Itacitinib is used in the research of myelofibrosis[1][2].

**IC₅₀ & Target**

JAK1
In Vitro  Itacitinib (INCB039110) is a potent and selective inhibitor of JAK1, with >20-fold selectivity for JAK1 over JAK2 and >100-fold over JAK3 and TYK2. Itacitinib is used in the research of myelofibrosis[1].

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

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REFERENCES
