# Imatinib Mesylate (STI571)

**Cat. No.:** A1805  
**CAS No.:** 229127-5/-1  
**Formula:** C29H31N7O·CH4SO3  
**M.Wt:** 589.71  
**Solvent & Solubility:**

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Mass Concentration</th>
<th>1mg</th>
<th>5mg</th>
<th>10mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td>1.6957 mL</td>
<td>8.4787 mL</td>
<td>16.9575 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>0.3391 mL</td>
<td>1.6957 mL</td>
<td>3.3915 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.1696 mL</td>
<td>0.8479 mL</td>
<td>1.6957 mL</td>
</tr>
</tbody>
</table>

> ≥29.5mg/mL in DMSO

Please refer to the solubility information to select the appropriate solvent.

**Storage:** Store at -20°C

**Target:** TGF-β / Smad Signaling  
**Pathway:** Bcr-Abl  
**Solvent & Solubility:**

### Biological Activity

**Short summary:** Abl/c-kit/PDGFR inhibitor  
**IC_{50} & Target:** 600 nM (v-Abl), 100 nM (PDGFR), 100 nM (c-Kit)

**Cell Viability Assay**

<table>
<thead>
<tr>
<th>Cell Line</th>
<th>T cells</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation method:</td>
<td>The solubility of this compound in DMSO is &gt;10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.</td>
</tr>
<tr>
<td>Reacting conditions:</td>
<td>IC50: 3.9 μM for inhibiting DCs-stimulated T-cell proliferation 2.9 μM for inhibiting PHA-stimulated T-cell proliferation 4 days</td>
</tr>
</tbody>
</table>
Cells were stimulated with allogeneic mature DCs or PHA in the presence of imatinib mesylate. The drug inhibited T-cell proliferation as a function of concentration. The effects were significant at 0.5 μM imatinib mesylate for the cells stimulated by DCs and at 1.0 μM imatinib mesylate for the cells stimulated with PHA. The IC50 values for imatinib mesylate–inhibited T-cell proliferation stimulated by DCs and PHA were 3.9 μM and 2.9 μM, respectively.

Administration of imatinib alone did not generate any changes in lung morphology. However, when imatinib was administered in bleomycin-treated mice, a reduction of fibrotic lesions in the subpleural areas of lung was observed at doses of 25 and 50 mg/kg/day. The quantitative histologic analysis demonstrated that the fibrotic score in mice treated with bleomycin and 50 mg/kg/day of imatinib was significantly lower than that treated with bleomycin alone. The collagen content of the lung was also significantly lower in mice treated with bleomycin and imatinib (50 mg/kg/day) as compared with those treated with bleomycin alone.

Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

**Product Citations**


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**References**


**Caution**

FOR RESEARCH PURPOSES ONLY.
NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

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