Flumatinib

Cat. No.: HY-13904
CAS No.: 895519-90-1
Molecular Formula: \( \text{C}_{29}\text{H}_{29}\text{F}_{3}\text{N}_{8}\text{O} \)
Molecular Weight: 562.59
Target: Bcr-Abl; c-Kit; PDGFR
Pathway: Protein Tyrosine Kinase/RTK
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 : ≥ 32 mg/mL (56.88 mM)
*”≥” means soluble, but saturation unknown.*

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>1.7775 mL</td>
<td>8.8875 mL</td>
<td>17.7749 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.3555 mL</td>
<td>1.7775 mL</td>
<td>3.5550 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.1777 mL</td>
<td>0.8887 mL</td>
<td>1.7775 mL</td>
</tr>
</tbody>
</table>

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

**BIOLOGICAL ACTIVITY**

**Description**  
Flumatinib (HHGV678) is a multi-kinase inhibitor with IC50 Values of 1.2 nM, 307.6 nM and 2662 nM for c-Abl, PDGFR β and c-Kit respectively.

**IC₅₀ & Target**  
IC50 Value: 1.2 nM (c-Abl); 307.6 nM(PDGFRβ); 2662 nM (c-Kit)[1].

**In Vitro**  
HH-GV-678 can predominantly inhibit the autophosphorylation of Bcr-Abl in K562 cell. In higher concentration, Flumatinib (HHGV678) can inhibit the phosphorylation of c-Kit in Mo7e cell and the phosphorylation of PDGFR in Swiss3T3 cell, however, Flumatinib (HHGV678) has no or little effect on other tyrosine kinase including EGFR, KDR, c-Src and HER2 [1]. Flumatinib (HHGV678) effectively overcame the drug resistance of certain KIT mutants with activation loop mutations (i.e., D820G, N822K, Y823D, and A829P) [2].

**In Vivo**  
The purpose of this study was to identify the metabolites of flumatinib in CML patients, with the aim of determining the main metabolic pathways of Flumatinib (HHGV678) in humans after oral administration. Ultra-performance liquid...
chromatography/quadrupole time-of-flight mass spectrometry revealed 34 metabolites; 7 primary metabolites were confirmed by comparison with synthetic reference standards. The results show that the parent drug Flumatinib (HHGV678) was the main form recovered in human plasma, urine, and feces. The main metabolites of Flumatinib (HHGV678) in humans were the products of N-demethylation, N-oxidation, hydroxylation, and amide hydrolysis [3].

REFERENCES

