SNS-062

Cat. No.: HY-101941
CAS No.: 1270014-40-8
Molecular Formula: C₁₉H₂₁ClN₆O
Molecular Weight: 384.86
Target: Btk, Itk
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
Solubility: DMSO
* “<1 mg/mL” means slightly soluble or insoluble. “≥” means soluble, but saturation unknown.

**PREPARING STOCK SOLUTIONS**

<table>
<thead>
<tr>
<th>Volume Concentration</th>
<th>Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td></td>
<td>2.5983 mL</td>
<td>12.9917 mL</td>
<td>25.9835 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td></td>
<td>0.5197 mL</td>
<td>2.5983 mL</td>
<td>5.1967 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td></td>
<td>0.2598 mL</td>
<td>1.2992 mL</td>
<td>2.5983 mL</td>
</tr>
</tbody>
</table>

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

**BIOLOGICAL ACTIVITY**

Description: SNS-062 is a potent, noncovalent BTK and ITK inhibitor, with $K_d$ of 0.3 nM and 2.2 nM, respectively; SNS-062 shows an IC₅₀ of 24 nM for ITK.

IC₅₀ & Target:
IC₅₀: 24 nM (ITK)
Kd: 0.3 nM (BTK), 2.2 nM (ITK)

In Vitro: SNS-062 inhibits pBTK in human whole blood with an average IC₅₀ of 50 nM. SNS-062 inhibits WT and C481S BTK with similar IC₅₀ (pBTK IC₅₀: WT BTK 2.9 nM, C481S BTK 4.4 nM). In a recombinant kinase assay, IC₅₀ of SNS-062 against WT BTK and C481S BTK are 4.6 nM and 1.1 nM. SNS-062 retains activity against the mutated BTK variant. SNS-062 is six times more potent than ibrutinib and greater than 640 times more potent than acalabrutinib against C481S BTK. SNS-062 demonstrates dose-dependent inhibition of BTK in primary patient CLL cells comparable to ibrutinib via immunoblot for BTK phosphorylation. SNS-062 decreases viability of primary CLL cells in the presence of HS5 stromal protection by 5.5%.

In Vivo: SNS-062 has good oral bioavailability in rat and dog (%F ≥ 40%) and a terminal half-life of 5 to 6 hours. SNS-062 is
well tolerated with continuous drug levels and at exposures much greater than those achieved for ibrutinib\cite{1}.

REFERENCES


Caution: Product has not been fully validated for medical applications. For research use only.

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