ML281

Cat. No.: HY-13495
CAS No.: 1404437-62-2
Molecular Formula: C_{22}H_{19}N_{3}O_{2}S
Molecular Weight: 389.47
Target: Others
Pathway: Others
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 (77.03 mM)
H_{2}O : < 0.1 mg/mL (insoluble)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

<table>
<thead>
<tr>
<th>Preparing</th>
<th>Concentration</th>
<th>Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stock</td>
<td>1 mM</td>
<td>2.5676 mL</td>
<td>12.8380 mL</td>
<td>25.6759 mL</td>
<td></td>
</tr>
<tr>
<td>Solvent</td>
<td>5 mM</td>
<td>0.5135 mL</td>
<td>2.5676 mL</td>
<td>5.1352 mL</td>
<td></td>
</tr>
<tr>
<td>Mass</td>
<td>10 mM</td>
<td>0.2568 mL</td>
<td>1.2838 mL</td>
<td>2.5676 mL</td>
<td></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 (6.42 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.42 mM); Clear solution

BIOLOGICAL ACTIVITY

Description
ML281 is a potent and selective STK33 inhibitor with IC50 of 14 nM. ML281 showed a 550-fold selectivity over AurB and greater than 700-fold selectivity over PKA target: STK33IC50: 14 nM [1]
ML281 showed low nanomolar inhibition of purified recombinant STK33 and a distinct selectivity profile as compared to other STK33 inhibitors. Even at the highest concentration tested (10 μM), ML281 had no effect on the viability of KRAS-dependent cancer cells. [2]

In Vitro
ML281 (10 μM; 72 hours) suppresses cell viability of NCI-H446 cells [3].
**Cell Viability Assay**

<table>
<thead>
<tr>
<th>Cell Line:</th>
<th>NCI-H446 cells</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentration:</td>
<td>10 μM</td>
</tr>
<tr>
<td>Incubation Time:</td>
<td>72 hours</td>
</tr>
<tr>
<td>Result:</td>
<td>Suppressed cell viability of NCI-H446 cells.</td>
</tr>
</tbody>
</table>

**CUSTOMER VALIDATION**

- [Neoplasma.](#) 2017;64(6):869-879.

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**REFERENCES**


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

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