**R-268712**

**Cat. No.:** HY-12953

**CAS No.:** 879487-87-3

**Molecular Formula:** C₂₀H₁₈FN₅O

**Molecular Weight:** 363.39

**Target:** TGF-β Receptor

**Pathway:** TGF-beta/Smad

**Storage:**
- Powder: -20°C, 3 years; 4°C, 2 years
- In solvent: -80°C, 6 months; -20°C, 1 month

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**Solvent & Solubility**

**In Vitro**

10 mM in DMSO

<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>Concentration</td>
<td>1 mM</td>
<td>5 mM</td>
<td>10 mM</td>
</tr>
<tr>
<td>Solvent</td>
<td>2.7519 mL</td>
<td>13.7593 mL</td>
<td>27.5186 mL</td>
</tr>
<tr>
<td>Mass</td>
<td>0.5504 mL</td>
<td>2.7519 mL</td>
<td>5.5037 mL</td>
</tr>
<tr>
<td>Mass</td>
<td>0.2752 mL</td>
<td>1.3759 mL</td>
<td>2.7519 mL</td>
</tr>
</tbody>
</table>

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

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**BIOLOGICAL ACTIVITY**

**Description**

R-268712 is a potent and selective inhibitor of ALK5 with an IC50 of 2.5 nM. IC50 value: 2.5 nM [1] Target: ALK5

In vitro:

R-268712 is a novel and specific inhibitor of activin receptor-like kinase 5 (ALK5), a transforming growth factor β (TGF-β) type I receptor. R-268712 is a potent and selective inhibitor of ALK5 with an IC50 of 2.5 nM, an approximately 5000-fold more selectivity for ALK5 than p38 mitogen-activated protein kinase (MAPK). R-268712 is a weak inhibitor of p38 MAP kinase (IC50: 12.1 μM).[1]

In vivo:

Oral administration of R-268712 at doses of 1, 3 and 10 mg/kg also inhibited the development of renal fibrosis in a dose-dependent manner in a unilateral ureteral obstruction (UUO) model. [1]

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**REFERENCES**
