**GW788388**

- **Cat. No.**: A8301
- **CAS No.**: 452342-67-5
- **Formula**: C25H23N5O2
- **M.Wt.**: 425.49
- **Synonyms**:
- **Target**: TGF-β / Smad Signaling
- **Pathway**: TGF-βR1(ALK5)
- **Storage**: Store at -20°C

### Solvent & Solubility

<table>
<thead>
<tr>
<th>Mass</th>
<th>Solvent</th>
<th>1mg</th>
<th>5mg</th>
<th>10mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>DMSO</td>
<td>2.3502 mL</td>
<td>11.7512 mL</td>
<td>23.5023 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>DMSO</td>
<td>0.4700 mL</td>
<td>2.3502 mL</td>
<td>4.7005 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>DMSO</td>
<td>0.2350 mL</td>
<td>1.1751 mL</td>
<td>2.3502 mL</td>
</tr>
</tbody>
</table>

≥21.25 mg/mL in DMSO; insoluble in EtOH; insoluble in H2O

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

### Biological Activity

**Shortsummary**

ALK5 inhibitor, potent and selective

**IC₅₀ & Target**

18 nM (ALK5)

**Cell Viability Assay**

**Cell Line**: NMuMG and MDA-MD-231 cells

**Preparation method**: The solubility of this compound in DMSO is >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.

**Reacting conditions**: 1, 2.5, 5 or 10 μM; 1 hr
| Applications: | In MDA-MD-231 cells, GW788388 dose-dependently inhibited TGF-β-induced Smad2 phosphorylation. In addition, TGF-β-mediated Smad1/5 phosphorylation, which requires ALK5 and TβRII, was also inhibited by GW788388. |

**Animal experiment**

| Animal models: | A db/db mouse model of spontaneous diabetic nephropathy |
| Dosage form: | 2 mg/kg/day; p.o.; for 5 weeks |
| Applications: | In a db/db mouse model of spontaneous diabetic nephropathy, GW788388 significantly reduced collagen deposits, substantially improved glomerulopathy (marked by mesangial matrix expansion, mesangial hypertrophy, proliferation, and glomerular basement membrane thickening), as well as decreased urinary albumin concentrations. |
| Other notes: | 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. |

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**Product Citations**

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**References**


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**Caution**

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NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

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