**Product Data Sheet**

**HDACs/mTOR Inhibitor 1**

Cat. No.: HY-114414  
CAS No.: 2271413-06-8  
Molecular Formula: $C_{28}H_{38}N_8O_5$  
Molecular Weight: 566.65  
Target: HDAC; mTOR; Apoptosis  
Pathway: Cell Cycle/DNA Damage; Epigenetics; PI3K/Akt/mTOR; Apoptosis  
Storage: Powder  
-20ºC 3 years  
4ºC 2 years  
In solvent  
-80ºC 6 months  
-20ºC 1 month

### SOLVENT & SOLUBILITY

#### In Vitro

DMSO: 32.5 mg/mL (57.35 mM; Need ultrasonic)

<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>1.7648 mL</td>
<td>8.8238 mL</td>
<td>17.6476 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.3530 mL</td>
<td>1.7648 mL</td>
<td>3.5295 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.1765 mL</td>
<td>0.8824 mL</td>
<td>1.7648 mL</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: ≥ 2.17 mg/mL (3.83 mM); Clear solution  
2. Add each solvent one by one: 10% DMSO >> 90% corn oil  
   Solubility: ≥ 2.17 mg/mL (3.83 mM); Clear solution

### BIOLOGICAL ACTIVITY

**Description**  
HDACs/mTOR Inhibitor 1 is a dual Histone Deacetylases (HDACs) and mammalian target of Rapamycin (mTOR) target inhibitor for treating hematologic malignancies, with IC50s of 0.19 nM, 1.8 nM, 1.2 nM and >500 nM for HDAC1, HDAC6, mTOR and PI3Kα, respectively. HDACs/mTOR Inhibitor 1 stimulates cell cycle arrest in G0/G1 phase and induce tumor cell apoptosis with low toxicity in vivo[1].

**IC50 & Target**  
<table>
<thead>
<tr>
<th>Target</th>
<th>IC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDAC1</td>
<td>0.19 nM (IC50)</td>
</tr>
<tr>
<td>HDAC6</td>
<td>1.8 nM (IC50)</td>
</tr>
<tr>
<td>mTOR</td>
<td>1.2 nM (IC50)</td>
</tr>
</tbody>
</table>