SW-100

Cat. No.: HY-115475
CAS No.: 2126744-35-0
Molecular Formula: C₁₇H₁₇ClN₂O₂
Molecular Weight: 316.78
Target: HDAC
Pathway: Cell Cycle/DNA Damage; Epigenetics
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 : ≥ 125 mg/mL (394.60 mM)
* “≥” means soluble, but saturation unknown.

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Mass Concentration</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>Solvent</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 mg</td>
<td>3.1568 mL</td>
<td>15.7838 mL</td>
<td>31.5676 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>0.6314 mL</td>
<td>3.1568 mL</td>
<td>6.3135 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.3157 mL</td>
<td>1.5784 mL</td>
<td>3.1568 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: ≥ 2.08 mg/mL (6.57 mM); Clear solution

2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.08 mg/mL (6.57 mM); Clear solution

3. Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.08 mg/mL (6.57 mM); Clear solution

BIOLOGICAL ACTIVITY

Description
SW-100, a selective histone deacetylase 6 (HDAC6) inhibitor with an IC₅₀ of 2.3 nM, shows at least 1000-fold selectivity for HDAC6 relative to all other HDAC isozymes. SW-100 displays a significantly improved ability to cross the blood-brain-barrier[1].

IC₅₀ & Target

<table>
<thead>
<tr>
<th>HDAC1</th>
<th>HDAC2</th>
<th>HDAC3</th>
<th>HDAC4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>
### In Vitro

<table>
<thead>
<tr>
<th>HDAC</th>
<th>IC&lt;sub&gt;50&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.23 μM</td>
<td>32.8 μM</td>
</tr>
<tr>
<td>HDAC5</td>
<td>4.07 μM</td>
</tr>
<tr>
<td>HDAC9</td>
<td>3.46 μM</td>
</tr>
<tr>
<td>HDAC10</td>
<td>26.2 μM</td>
</tr>
</tbody>
</table>

In Vitro SW-100 (0.01-10 μM; 48 hours) shows obvious increase in the acetylated α-tubulin levels in a dose-dependent manner.<sup>[1]</sup>  
**Western Blot Analysis**<sup>[1]</sup>  
**Cell Line:** HEK293 cells  
**Concentration:** 0.01, 0.1, 1, 10 μM  
**Incubation Time:** 48 hours  
**Result:** Showed obvious increase in the acetylated α-tubulin levels in a dose-dependent manner.

### In Vivo

In Vivo SW-100 (20 mg/kg; i.p.; twice a day for two days) ameliorates several memory and learning impairments including novel object recognition, temporal ordering, and coordinate and categorical spatial processing in mouse model of Fragile X syndrome.<sup>[1]</sup>  
**Animal Model:** 8-10 weeks old C57BL/6 mice (<sup>Fmr1</sup>-/- mice)<sup>[1]</sup>  
**Dosage:** 20 mg/kg  
**Administration:** Intraperitoneal injection; twice a day for two days  
**Result:** Ameliorated several memory and learning impairments including novel object recognition, temporal ordering, and coordinate and categorical spatial processing in <sup>Fmr1</sup>-/- mice

### REFERENCES


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

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