ML324

**Cat. No.:** HY-12725  
**CAS No.:** 1222800-79-4

**Molecular Formula:** C₂₁H₂₃N₃O₂  
**Molecular Weight:** 349.43

**Target:** Histone Demethylase; HSV  
**Pathway:** Epigenetics; Anti-infection

**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: ≥ 33 mg/mL (94.44 mM)  
* "≥" means soluble, but saturation unknown.

<table>
<thead>
<tr>
<th>Concentration</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>2.8618 mL</td>
<td>14.3090 mL</td>
<td>28.6180 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.5724 mL</td>
<td>2.8618 mL</td>
<td>5.7236 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.2862 mL</td>
<td>1.4309 mL</td>
<td>2.8618 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: ≥ 2.5 mg/mL (7.15 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
   Solubility: ≥ 2.5 mg/mL (7.15 mM); Clear solution

**BIOLOGICAL ACTIVITY**

**Description**  
ML324 is a potent JMJD2 demethylase inhibitor with demonstrated antiviral activity. [IC₅₀ value: 920 nM(JMJD2E)]  
[1] Target: JMJD2 demethylase inhibitor  
ML324 is a probe molecule that displays submicromolar inhibitory activity toward JMJD2E (in vitro) and possesses excellent in vitro ADME properties. In contrast to previously reported inhibitors of the JMJD proteins, ML324 displays excellent cell permeability providing an opportunity for more extensive cell-based studies of JMJD2 enzymes to be undertaken. In addition, ML324 demonstrates potent anti-viral activity against both herpes simplex virus (HSV) and human cytomegalovirus (hCMV) infection via inhibition viral IE gene expression. ML324 suppresses the formation of HSV plaques, even at high MOI, and blocks HSV-1 reactivation in a mouse ganglia explant model of latently infected mice.
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REFERENCES