## ML355

**Cat. No.:** HY-12341  
**CAS No.:** 1532593-30-8  
**Molecular Formula:** C₂₁H₁₉N₃O₄S₂  
**Molecular Weight:** 441.52  
**Target:** Lipoxygenase  
**Pathway:** Metabolic Enzyme/Protease  
**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: ≥ 42 mg/mL (95.13 mM)  
*“≥” means soluble, but saturation unknown.*

<table>
<thead>
<tr>
<th>Solvent &amp; Concentration</th>
<th>Mass (mL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mg</td>
<td>2.2649 mL</td>
</tr>
<tr>
<td>5 mg</td>
<td>11.3245 mL</td>
</tr>
<tr>
<td>10 mg</td>
<td>22.6490 mL</td>
</tr>
</tbody>
</table>

#### Preparing Stock Solutions

<table>
<thead>
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</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 (5.66 mM); Clear solution

2. Add each solvent one by one: 10% DMSO > 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.5 mg/mL (5.66 mM); Clear solution

3. Add each solvent one by one: 10% DMSO > 90% corn oil  
Solubility: ≥ 2.5 mg/mL (5.66 mM); Clear solution

### BIOLOGICAL ACTIVITY

**Description**
ML355 is a potent and selective inhibitor of 12-Lipoxygenase (12-LOX) with an IC₅₀ of 0.34 μM, shows excellent selectivity over related lipoxygenases and cyclooxygenases, and possesses favorable ADME properties.

**IC₅₀ & Target**
12-LOX  
0.34 μM (IC₅₀)
In Vitro
ML355 inhibits PAR-4 induced aggregation and calcium mobilization in human platelets and reduce 12-HETE in β-cells[1].

In Vivo
ML355 (1.88-30 mg/kg; i.g.; 2 times per day for two days) strongly inhibits the thrombus formation in mice at higher dose compared to WT controls[3].

<table>
<thead>
<tr>
<th>Animal Model:</th>
<th>C57BL/6 mice[3]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dosage:</td>
<td>1.88, 3.75, 7.5, 15, 30 mg/kg</td>
</tr>
<tr>
<td>Administration:</td>
<td>Oral gavage; 2 times per day for two days</td>
</tr>
<tr>
<td>Result:</td>
<td>The thrombus formation in mice was strongly inhibited by higher doses of ML355.</td>
</tr>
</tbody>
</table>

REFERENCES


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