L-Chicoric Acid

**Cat. No.:** HY-N0457A  
**CAS No.:** 70831-56-0

**Molecular Formula:** C₂₂H₁₈O₁₂  
**Molecular Weight:** 474.37

**Target:** HIV Integrase; HIV  
**Pathway:** Metabolic Enzyme/Protease; Anti-infection

**Storage:** -20°C, stored under nitrogen  
* In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)

**SOLVENT & SOLUBILITY**

**In Vitro**  
DMSO : 100 mg/mL (210.81 mM; Need ultrasonic)

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Concentration</th>
<th>Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td>2.1081 mL</td>
<td>10.5403 mL</td>
<td>21.0806 mL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>0.4216 mL</td>
<td>2.1081 mL</td>
<td>4.2161 mL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.2108 mL</td>
<td>1.0540 mL</td>
<td>2.1081 mL</td>
<td></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 (5.27 mM); Clear solution

2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.5 mg/mL (5.27 mM); Clear solution

3. Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.5 mg/mL (5.27 mM); Clear solution

**BIOLOGICAL ACTIVITY**

**Description**  
L-Chicoric Acid ((-)-Chicoric acid) is a dicafeoyltartaric acid and a potent, selective and reversible HIV-1 integrase inhibitor with an IC₅₀ of ~100 nM. L-Chicoric Acid inhibits HIV-1 replication in tissue culture¹²³.

**IC₅₀ & Target**  
IC₅₀: ~100 nM (HIV-1 integrase)[¹][²]

**In Vitro**  
L-Chicoric Acid inhibits integration at concentrations from 500 nM to 10 μM but also inhibits entry at concentrations above 1 μM. L-Chicoric Acid clearly affects viral entry at concentrations of 5 μM and higher. L-Chicoric Acid also
inhibits integration as indicated both by an increased ratio of two LTR circle DNA to cDNA and an accompanying decrease in integrated provirus. The EC$_{50}$ of L-Chicoric Acid against HIV is approximately 500 nM, a concentration that does not inhibit HIV entry in H9 cells$^{[1]}$. The ED$_{50}$ of L-Chicoric Acid against HIV$_{NL4-3}$ control virus is 400 nM, while HIV$_{NL4-3}$ passaged in the presence of 8 μM L-Chicoric Acid is completely resistant to the compound$^{[2]}$.

**REFERENCES**

