**Curculigoside**

Cat. No.: HY-N0705  
CAS No.: 85643-19-2  
Molecular Formula: $C_{22}H_{26}O_{11}$  
Molecular Weight: 466.44  
Target: JAK; STAT; NF-κB  
Pathway: Epigenetics; JAK/STAT Signaling; Stem Cell/Wnt; NF-κB  
Storage: 4°C, protect from light

* In solvent: -80°C, 6 months; -20°C, 1 month (protect from light)

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**SOLVENT & SOLUBILITY**

**In Vitro**

DMSO: 100 mg/mL (214.39 mM; Need ultrasonic)

<table>
<thead>
<tr>
<th>Solvent Concentration</th>
<th>Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>2.1439 mL</td>
<td>10.7195 mL</td>
<td>21.4390 mL</td>
<td></td>
</tr>
<tr>
<td>5 mM</td>
<td>0.4288 mL</td>
<td>2.1439 mL</td>
<td>4.2878 mL</td>
<td></td>
</tr>
<tr>
<td>10 mM</td>
<td>0.2144 mL</td>
<td>1.0719 mL</td>
<td>2.1439 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: ≥ 2.08 mg/mL (4.46 mM); Clear solution

2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
   Solubility: ≥ 2.08 mg/mL (4.46 mM); Clear solution

3. Add each solvent one by one: 10% DMSO >> 90% corn oil  
   Solubility: ≥ 2.08 mg/mL (4.46 mM); Clear solution

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**BIOLOGICAL ACTIVITY**

**Description**

Curculigoside is the main saponin in C. orchioide, exerts significant antioxidant, anti-osteoporosis, antidepressant and neuroprotection effects. Curculigoside possesses significant anti-arthritic effects in vivo and in vitro via regulation of the JAK/STAT/NF-κB signaling pathway\[1\].

**IC₅₀ & Target**

JAK; STAT; NF-κB\[1\]

**In Vitro**

Curculigoside (1-64 μg/ml; 72 hours) exerts significant inhibitory effects on MHTA cell viability between 1 and 64 μg/ml in MHTA cells\[1\].

Curculigoside (4-16 μg/ml; 24 hours) decreases the protein expression of JAK1, JAK3 and STAT3 compared to the TNF-α
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### Cell Viability Assay

<table>
<thead>
<tr>
<th>Cell Line:</th>
<th>MH7A cells</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentration:</td>
<td>1 μg/ml; 2 μg/ml; 4 μg/ml; 8 μg/ml; 16 μg/ml; 32 μg/ml; 64 μg/ml</td>
</tr>
<tr>
<td>Incubation Time:</td>
<td>72 hours</td>
</tr>
<tr>
<td>Result:</td>
<td>Had inhibitory effect on MH7A cells.</td>
</tr>
</tbody>
</table>

### Western Blot Analysis

<table>
<thead>
<tr>
<th>Cell Line:</th>
<th>MH7A cells</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentration:</td>
<td>4 μg/ml; 64 μg/ml</td>
</tr>
<tr>
<td>Incubation Time:</td>
<td>24 hours</td>
</tr>
<tr>
<td>Result:</td>
<td>Downregulated JAK1, JAK3 and STAT3 protein expression.</td>
</tr>
</tbody>
</table>

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**CUSTOMER VALIDATION**

- Hum Exp Toxicol. Jan-Dec 2022;41:9603271221087146.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

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**REFERENCES**


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

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