Daucosterol

**Cat. No.:** HY-N0410  
**CAS No.:** 474-58-8  
**Molecular Formula:** \( \text{C}_{35}\text{H}_{60}\text{O}_{6} \)  
**Molecular Weight:** 576.85  
**Target:** Others  
**Pathway:** Others  
**Storage:**  
- Powder: -20°C, 3 years; 4°C, 2 years  
- In solvent: -80°C, 6 months; -20°C, 1 month

### SOLVENT & SOLUBILITY

**In Vitro**

<table>
<thead>
<tr>
<th>Solvent</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMSO</td>
<td>1.7336 mL</td>
<td>8.6678 mL</td>
<td>17.3355 mL</td>
</tr>
</tbody>
</table>

Preparing Stock Solutions

<table>
<thead>
<tr>
<th>Concentration</th>
<th>1 mM</th>
<th>5 mM</th>
<th>10 mM</th>
</tr>
</thead>
<tbody>
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<td>1 mM</td>
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</tr>
<tr>
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</tbody>
</table>

Please refer to the solubility information to select the appropriate solvent.

### BIOLOGICAL ACTIVITY

**Description**

Daucosterol is a natural sterolin. IC50 value: Target:In vitro: In the study of the effects of daucosterol on the survival of cultured cortical neurons after neurons were subjected to oxygen and glucose deprivation and simulated reperfusion (OGD/R)\(^2\), the results showed that post-treatment of daucosterol significantly reduced neuronal loss, as well as apoptotic rate and caspase-3 activity, displaying the neuroprotective activity. We also found that daucosterol increased the expression level of IGF1 protein, diminished the down-regulation of p-AKT\(^3\) and p-GSK-3\(^\beta\)\(^4\), thus activating the AKT\(^5\) signal pathway \(^1\). Cell counting kit-8 (CCK-8) assay showed that daucosterol significantly increased the quantity of viable cells and the effectiveness of daucosterol was similar to that of basic fibroblast growth factor (bFGF) and epidermal growth factor (EGF) \(^2\). Daucosterol inhibits the proliferation of human breast cancer cell line MCF-7 and gastric cancer cell lines MGC803, BGC823 and AGS in a dose-dependent manner. Furthermore, daucosterol inhibits murine hepatoma H22 cell growth in ICR mice. Daucosterol treatment induces intracellular ROS generation and autophagy, but not apoptotic cell death. Treatment with ROS scavenger GSH (reduced glutathione), NAC (N-acetyl-l-cysteine) or autophagy inhibitor 3-Methyladenine (3-MA) counteracted daucosterol-induced autophagy and growth inhibition in BGC823 and MCF-7 cancer cells \(^3\).In vivo:
CUSTOMER VALIDATION

- Behav Brain Res. 2020 Jan 27;378:112279.
- MethodsX. 2020 Feb 20;7:100821.

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REFERENCES

