Curcumol

Cat. No.: HY-N0104
CAS No.: 4871-97-0
Molecular Formula: C₁₅H₂₄O₂
Molecular Weight: 236.35
Target: Apoptosis
Pathway: Apoptosis
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: ≥ 100 mg/mL (423.10 mM)
H₂O: < 0.1 mg/mL (insoluble)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

<table>
<thead>
<tr>
<th>Solvent Mass</th>
<th>Concentration</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td>4.2310 mL</td>
<td>21.1551 mL</td>
<td>42.3101 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>0.8462 mL</td>
<td>4.2310 mL</td>
<td>8.4620 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.4231 mL</td>
<td>2.1155 mL</td>
<td>4.2310 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 >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (10.58 mM); Clear solution

BIOLOGICAL ACTIVITY

Curcumol is a sesquiterpene originally isolated from curcuma rhizomes; shows anticancer activities both in vitro and in vivo. IC50 value: Target: Anticancer natural compound in vitro: Curcumol exhibited time- and concentration-dependent anti-proliferative effects in SPC-A-1 human lung adenocarcinoma cells with cell cycle arrest in the G0/G1 phase while apoptosis-induction was also confirmed with flow cytometry and morphological analyses [1]. Curcumol-induced growth inhibition correlated with apoptosis induction as evidenced by Annexin V staining, and cleavage of caspase-3 and poly (ADP-ribose) polymerase (PARP) in HSC-T6. Suppression of the NF-κB translocation via inhibition of IκB-α phosphorylation by the curcumol led to the inhibition of expression of NF-κB-regulated gene, e.g. Bcl-xL and Bcl-2, in a PI3K-dependent manner, which is upstream of NF-κB activation [2]. Curcumol exhibits an inhibitory effect on receptor activator of nuclear factor kappaB ligand (RANKL)-induced osteoclast differentiation with both bone
marrow-derived macrophages and RAW264.7 cells in a dose-dependent manner [3]. In vivo: Anti-neoplastic effects of curcumol were also confirmed in tumor bearing mice. Curcumol (60 mg/kg daily) significantly reduced tumor size without causing notable toxicity [1].

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REFERENCES


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

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