Bakuchiol

Cat. No.: HY-N0235
CAS No.: 10309-37-2
Molecular Formula: \( \text{C}_{18}\text{H}_{24}\text{O} \)
Molecular Weight: 256.38
Target: p38 MAPK; Autophagy
Pathway: MAPK/ERK Pathway; Autophagy
Storage: -20°C, protect from light

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

**SOLVENT & SOLUBILITY**

**In Vitro**
DMSO: 62.5 mg/mL (243.78 mM; Need ultrasonic)

H\(_2\)O: < 0.1 mg/mL (insoluble)

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent</th>
<th>Mass</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1 mg</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>5 mg</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>10 mg</td>
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<tr>
<td>1 mM</td>
<td></td>
<td>3.9005 mL</td>
<td>19.5023 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td></td>
<td>0.7801 mL</td>
<td>3.9005 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td></td>
<td>0.3900 mL</td>
<td>1.9502 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% (20% SBE-\(\beta\)-CD in saline)
   Solubility: ≥ 2.17 mg/mL (8.46 mM); Clear solution

2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.17 mg/mL (8.46 mM); Clear solution

**BIOLOGICAL ACTIVITY**

**Description**
Bakuchiol is a phytoestrogen isolated from the seeds of Psoralea corylifolia L; has anti-tumor effects. IC\(_{50}\) value:
Target: in vitro: Bakuchiol reduced mitochondrial membrane potential (Psim) of cells in a concentration- and

Bakuchiol was found to be naturally occurring potent inhibitors of hCE2, with low Ki values ranging from 0.62μM to 3.89μM [3]. After exposure to bakuchiol at 0.25-fold, 0.5-fold and 1-fold of minimum inhibitory concentration (MIC) (3.91 μg/ml) for 24h, the fungal conidia of T. mentagrophytes demonstrated a significant dose-dependent increase in membrane permeability. Moreover, bakuchiol at 1-fold MIC elicited a 187% elevation in reactive oxygen species (ROS) level in
fungal cells after a 3-h incubation [4]. in vivo: In combination with the reported concentration after an intravenous administration of bakuchiol (15 mg/kg) in rats, the high risk of in vivo inhibition of bakuchiol towards UGT2B7-catalyzed metabolism of drugs was indicated [2]. In a guinea pig model of tinea pedis, bakuchiol at 1%, 5% or 10% (w/w) concentration in aqueous cream could significantly reduce the fungal burden of infected feet (p<0.01-0.05) [4].

REFERENCES


