Neobaviaosiflavone

Cat. No.: HY-N0720
CAS No.: 41060-15-5
Molecular Formula: C$_{20}$H$_{18}$O$_4$
Molecular Weight: 322.35
Target: Apoptosis; DNA/RNA Synthesis
Pathway: Apoptosis; Cell Cycle/DNA Damage
Storage: Powder -20°C 3 years
4°C 2 years
In solvent -80°C 2 years
-20°C 1 year

SOLVENT & SOLUBILITY

In Vitro
DMSO: ≥ 31 mg/mL (96.17 mM)
* "≥" means soluble, but saturation unknown.

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Concentration</th>
<th>Mass 1 mg</th>
<th>Mass 5 mg</th>
<th>Mass 10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td>3.1022 mL</td>
<td>15.5111 mL</td>
<td>31.0222 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>0.6204 mL</td>
<td>3.1022 mL</td>
<td>6.2044 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.3102 mL</td>
<td>1.5511 mL</td>
<td>3.1022 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 >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (6.45 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (6.45 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (6.45 mM); Clear solution

BIOLOGICAL ACTIVITY

Description
Neobaviaosiflavone, a flavonoid, is isolated from the seeds of Psoralea corylifolia. Neobaviaosiflavone exhibits anti-inflammatory, anti-cancer and anti-oxidation activities. Neobaviaosiflavone inhibits DNA polymerase at moderate to high concentrations. Neobaviaosiflavone also inhibits platelet aggregation$^{[1][2][3][4][5]}$.

IC$_{50}$ & Target
DNA polymerase$^{[4]}$
**In Vitro**

Neobavaisoflavone (1-50 μM; 20 h) decreases NO (ED$_{50}$=25 μM) and cytokine (ED$_{50}$=23.11, 5.03, 5.23, 5.26 and 18.80 μM for IL-1β, IL-6, IL-12p40, IL-12p70 and TNF-α, respectively) production in LPS plus IFN-γ-stimulated RAW264.7 macrophages\[1\].

Neobavaisoflavone (1-100 μM; 30 min) decreases the chemiluminescence in PMA-stimulated RAW264.7 macrophages, with an ED$_{50}$ of 19.94 μM in activated RAW264.7 cells\[1\].

Neobavaisoflavone (1-100 μM; 20 h) has no effect on the viability and is not toxic to RAW264.7 cells\[1\].

Neobavaisoflavone (20-50 μM; 48 h) inhibits prostate cancer cell proliferation by inducing cytotoxicity and apoptosis in a dose-dependent manner\[2\].

Neobavaisoflavone (2-8 μM; 7 d) inhibits RANKL-mediated osteoclastogenesis in bone marrow monocytes (BMMCs) and RAW264.7 cells dose dependently at the early stage\[3\].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**In Vivo**

Neobavaisoflavone (30 mg/kg; i.p. for 6 weeks) inhibits osteoclastogenesis, promotes osteogenesis and ameliorates bone loss in ovariectomized mice\[3\].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

<table>
<thead>
<tr>
<th>Animal Model</th>
<th>C57BL/6 female mice (8 weeksd; 20-25 g) were removed bilateral ovaries[3]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dosage</td>
<td>30 mg/kg</td>
</tr>
<tr>
<td>Administration</td>
<td>i.p. for 6 weeks</td>
</tr>
<tr>
<td>Result</td>
<td>Attenuated bone loss by inhibiting osteoclast activation and promoting osteogenesis in ovariectomized mice.</td>
</tr>
</tbody>
</table>

**CUSTOMER VALIDATION**

- PhytoMedicine. 2023 May 9, 154869.
- Biomed Pharmacother. 2020 Sep;129:110369.
- Int Immunopharmacol. October 2022, 109103.

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**REFERENCES**


