Formononetin

Cat. No.: HY-N0183
CAS No.: 485-72-3
Molecular Formula: C₁₆H₁₂O₄
Molecular Weight: 268.26
Target: FGFR
Pathway: Protein Tyrosine Kinase/RTK
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>Concentration</th>
<th>Solvent</th>
<th>Mass (1 mg)</th>
<th>Mass (5 mg)</th>
<th>Mass (10 mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>DMSO: ≥ 35 mg/mL (130.47 mM)</td>
<td>3.7277 mL</td>
<td>18.6386 mL</td>
<td>37.2773 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>DMSO: ≥ 35 mg/mL (130.47 mM)</td>
<td>0.7455 mL</td>
<td>3.7277 mL</td>
<td>7.4555 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>DMSO: ≥ 35 mg/mL (130.47 mM)</td>
<td>0.3728 mL</td>
<td>1.8639 mL</td>
<td>3.7277 mL</td>
</tr>
</tbody>
</table>

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

BIOLOGICAL ACTIVITY

Description

Formononetin (Formononetol; Flavosil) is a bioactive component extracted from the red clover; inhibits the proliferation of DU-145/PC-3 cells in a dose-dependent manner. IC₅₀ value: Target: anti-cancer in vitro: formononetin inhibited the proliferation of DU-145 cells in a dose-dependent manner. DU-145 cells treated with different concentrations of formononetin displayed obvious morphological changes of apoptosis under fluorescence microscopy. In addition, formononetin increased the proportion of early apoptotic DU-145 cells, down-regulated the protein levels of Bcl-2 and up-regulated those of RASD1 and Bax [1]. Formononetin significantly inhibited the cell growth of PC-3 in a dose-dependent manner, but no such effect was observed in RWPE1 cells. Formononetin treatment contributed to the reduced Bcl-2 protein level and the elevated Bax expression in PC-3 cells, thereby resulting in the increasing Bax/Bcl-2 ratios. Furthermore, the phosphorylated level of p38 in PC-3 cells was activated through the FN treatment, whereas the endogenous Akt phosphorylation was blocked [2]. Compared with the control, formononetin inhibited the proliferation of MCF-7 cells and effectively induced cell cycle arrest. The levels of p-IGF-1?R, p-Akt, cyclin D1 protein expression, and cyclin D1 mRNA expression were also downregulated [3]. In vivo: formononetin also prevented the tumor growth of human breast cancer cells in nude mouse xenografts [3].
REFERENCES


Caution: Product has not been fully validated for medical applications. For research use only.
Tel: 609-228-6898                  Fax: 609-228-5909                  E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA