Quercetagetin

Cat. No.: HY-N4149
CAS No.: 90-18-6
Molecular Formula: C₁₅H₁₀O₈
Molecular Weight: 318.24
Target: Pim
Pathway: JAK/STAT Signaling
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: 125 mg/mL (392.79 mM; Need ultrasonic)

<table>
<thead>
<tr>
<th>Solvent Concentration</th>
<th>Mass (mg/mL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mg</td>
<td>3.1423 mL</td>
</tr>
<tr>
<td>5 mg</td>
<td>15.7114 mL</td>
</tr>
<tr>
<td>10 mg</td>
<td>31.4228 mL</td>
</tr>
</tbody>
</table>

Preparing Stock Solutions

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Concentration</th>
<th>Mass (mg/mL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>3.1423 mL</td>
<td></td>
</tr>
<tr>
<td>5 mM</td>
<td>0.6285 mL</td>
<td></td>
</tr>
<tr>
<td>10 mM</td>
<td>0.3142 mL</td>
<td></td>
</tr>
</tbody>
</table>

In Vivo
1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (6.54 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (6.54 mM); Clear solution

BIOLOGICAL ACTIVITY

Description
Quercetagetin (6-Hydroxyquercetin) is the major flavonoid isolated from Citrus unshiu (C. unshiu) peel[1]. Quercetagetin is a moderately potent and selective, cell-permeable pim-1 kinase inhibitor (IC₅₀, 0.34 µM)[2]. Anti-inflammatory and anticancer properties.

IC₅₀ & Target

<table>
<thead>
<tr>
<th>IC₅₀ &amp; Target</th>
<th>PIM1</th>
<th>PIM2</th>
<th>RSK2</th>
<th>PKA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentration</td>
<td>0.34 µM</td>
<td>3.45 µM</td>
<td>2.82 µM</td>
<td>21.2 µM</td>
</tr>
</tbody>
</table>

In Vitro
Quercetagetin also inhibits PIM2, PKA, and RSK2 with IC₅₀s of 3.45, 21.2, and 2.82 µM, respectively[2]. Quercetagetin (0.1, 1, 10, and 100 µM, 72 hours) inhibits growth of RWPE2 prostate cancer cells with average ED₅₀ is 3.8 µM[2].
## Cell Viability Assay

**Cell Line:** RWPE2 prostate cancer cells  
**Concentration:** 0.1, 1, 10, and 100 μM  
**Incubation Time:** 72 hours  
**Result:** Inhibited growth of RWPE2 prostate cancer cells with average ED<sub>50</sub> is 3.8 μM.

## In Vivo

Quercetagetin significantly inhibits UVB-induced skin cancer development. Topical application of 4 or 20 nmol of Quercetagetin to mouse skin reduces tumor incidence by 32.0% and 46.7%, respectively.[3]  
**Animal Model:** SKH-1 hairless mice model[3]  
**Dosage:** 4 or 20 nmol  
**Administration:** Topical application; 28 weeks  
**Result:** Inhibited UVB-induced skin tumorigenesis in SKH-1 hairless mice models. Delayed the development of tumors and reduced tumor volumes in an SKH-1 hairless mice model.

### CUSTOMER VALIDATION


See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

### REFERENCES

