**Tangeretin**

**Cat. No.:** HY-N0133  
**CAS No.:** 481-53-8  
**Molecular Formula:** $C_{20}H_{20}O_7$  
**Molecular Weight:** 372.37  
**Target:** Notch; Apoptosis  
**Pathway:** Neuronal Signaling; Stem Cell/Wnt; Apoptosis  
**Storage:**  
- Powder: -20°C 3 years, 4°C 2 years  
- In solvent: -80°C 1 year, -20°C 6 months

**SOLVENT & SOLUBILITY**

**In Vitro**  
DMSO: 25 mg/mL (67.14 mM; Need ultrasonic)

<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>1 mM</td>
<td></td>
<td>2.6855 mL</td>
<td>13.4275 mL</td>
<td>26.8550 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td></td>
<td>0.5371 mL</td>
<td>2.6855 mL</td>
<td>5.3710 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td></td>
<td>0.2686 mL</td>
<td>1.3428 mL</td>
<td>2.6855 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 (6.71 mM); Clear solution

**BIOLOGICAL ACTIVITY**

**Description**  
Tangeretin (Tangeritin), a flavonoid from citrus fruit peels, has been proven to play an important role in anti-inflammatory responses and neuroprotective effects in several disease models, and is a Notch-1 inhibitor.

**IC₅₀ & Target**  
Notch-1

**In Vitro**  
Tangeretin enhanced the radiosensitivity of GC cells as demonstrated by MTT and colony formation assays. Tangeretin also attenuated radiation-induced EMT, invasion and migration in GC cells, accompanied by a decrease in Notch-1, Jagged1/2, Hey-1 and Hes-1 expressions. Tangeretin triggered the upregulation of miR-410, a tumor-suppressive microRNA. Furthermore, re-expression of miR-410 prevented radiation-induced EMT and cell invasion\(^1\).  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**In Vivo**  
In this study, we investigated the in vivo anti-RSV activity of tangeretin in 3-week-old male BALB/c mice. A plaque reduction
assay and fluorescence quantitative polymerase chain reaction (FQ-PCR) showed that tangeretin inhibited RSV replication in the lung of mice[2].

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**PROTOCOL**

**Cell Assay**

The effect of tangeretin on RAW264.7 cells was determined using a MTT assay as previously reported.(13) Briefly, RAW264.7 cells (1 × 104 cells/well) were seeded in a 96-well plate for 24 h and treated with different concentrations of tangeretin (6.3–50.0 μM) and dimethyl sulfoxide (DMSO) (vehicle control, 0.01 and 0.1%) for 10 or 48 h. The absorbance was measured at 570 nm using an enzyme immunoassay (EIA) reader (Thermo Scientific, Waltham, MA), and cell viability (%) was calculated as follows: 

\[
\left(\frac{\text{absorbance of the test group} - \text{absorbance of the blank control}}{\text{absorbance of the control group} - \text{absorbance of the blank control}}\right) \times 100.
\]

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**Animal Administration**

Animal administration [2] The mice were maintained in an air-conditioned, pathogen-free room (temperature of 24 ± 2 °C, with a 12 h light/dark cycle from 6:00 am to 6:00 pm) with free access to food and water. Mice were randomly divided into five groups (n = 10) as follows: normal (control), RSV-challenged, and three treatment groups administered 25, 50, or 100 mg/kg/day tangeretin dissolved in saline. The control and RSV-challenged groups received equal volumes of saline. During the experiment, mice in the treatment groups were intragastrically administrated tangeretin for 3 days consecutively before RSV stimulation. Mice were lightly anesthetized with diethyl ether and intranasally challenged with RSV Long strain [6.7 × 106 plaque-forming units (PFU)] on day 4 after tangeretin treatment, while the control group was sham-infected with an equal volume of HEp-2 cell lysate, which was centrifuged under the same conditions as the viral suspensions. The mice were weighed during the experiment and sacrificed on day 5 post-infection after anesthetizing them with chloral hydrate (Figure 1B). The lung tissues were removed and weighed, and the lung index was calculated using the following formula: lung index = lung weight/body weight.

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**CUSTOMER VALIDATION**

- Phytomedicine. 2023 Jun 16, 154928.
- Phytomedicine. 5 January 2022, 153928.
- Biomed Pharmacother. 2020 Sep;129:110369.

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**REFERENCES**


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

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