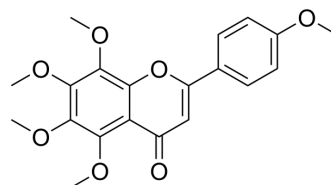


## Tangeretin

<b>Cat. No.:</b>	HY-N0133												
<b>CAS No.:</b>	481-53-8												
<b>Molecular Formula:</b>	C <sub>20</sub> H <sub>20</sub> O <sub>7</sub>												
<b>Molecular Weight:</b>	372.37												
<b>Target:</b>	Notch; Apoptosis												
<b>Pathway:</b>	Neuronal Signaling; Stem Cell/Wnt; Apoptosis												
<b>Storage:</b>	<table border="0"> <tr> <td>Powder</td> <td>-20°C</td> <td>3 years</td> </tr> <tr> <td></td> <td>4°C</td> <td>2 years</td> </tr> <tr> <td>In solvent</td> <td>-80°C</td> <td>1 year</td> </tr> <tr> <td></td> <td>-20°C</td> <td>6 months</td> </tr> </table>	Powder	-20°C	3 years		4°C	2 years	In solvent	-80°C	1 year		-20°C	6 months
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	4°C	2 years											
In solvent	-80°C	1 year											
	-20°C	6 months											



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 25 mg/mL (67.14 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	1 mM	2.6855 mL	13.4275 mL	26.8550 mL
		5 mM	0.5371 mL	2.6855 mL	5.3710 mL
10 mM		0.2686 mL	1.3428 mL	2.6855 mL	
Please refer to the solubility information to select the appropriate solvent.					
<b>In Vivo</b>	1. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (6.71 mM); Clear solution				

### BIOLOGICAL ACTIVITY

<b>Description</b>	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.
<b>IC<sub>50</sub> &amp; Target</b>	Notch-1
<b>In Vitro</b>	<p>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<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>
<b>In Vivo</b>	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<sup>[2]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## PROTOCOL

### Cell Assay

The effect of tangeretin on RAW264.7 cells was determined using a MTT assay as previously reported.<sup>(13)</sup> Briefly, RAW264.7 cells ( $1 \times 10^4$  cells/well) were seeded in a 96-well plate for 24 h and treated with different concentrations of tangeretin (6.3–50.0  $\mu$ M) 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:  $[(\text{absorbance of the test group} - \text{absorbance of the blank control}) / (\text{absorbance of the control group} - \text{absorbance of the blank control})] \times 100$ .

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### Animal Administration

Animal administration [2] The mice were maintained in an air-conditioned, pathogen-free room (temperature of  $24 \pm 2$  °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 administered tangeretin for 3 days consecutively before RSV stimulation. Mice were lightly anesthetized with diethyl ether and intranasally challenged with RSV Long strain [ $6.7 \times 10^6$  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.

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

## CUSTOMER VALIDATION

- Phytomedicine. 2023 Jun 16, 154928.
- Phytomedicine. 5 January 2022, 153928.
- Biomed Pharmacother. 2020 Sep;129:110369.
- J Agric Food Chem. 2022 Sep 5.
- J Agric Food Chem. 2022 Feb 9;70(5):1536-1546.

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## REFERENCES

- [1]. Zhang X, et al. Tangeretin enhances radiosensitivity and inhibits the radiation-induced epithelial-mesenchymal transition of gastric cancer cells. *Oncol Rep.* 2015 Jul;34(1):302-10.
- [2]. Xu JJ, et al. Tangeretin from Citrus reticulata Inhibits Respiratory Syncytial Virus Replication and Associated Inflammation in Vivo. *J Agric Food Chem.* 2015 Nov 4;63(43):9520-7.
- [3]. Hagenlocher Y, et al. Citrus peel polymethoxyflavones nobiletin and tangeretin suppress LPS- and IgE-mediated activation of human intestinal mast cells. *Eur J Nutr.* 2017 Jun;56(4):1609-1620.

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**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](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA