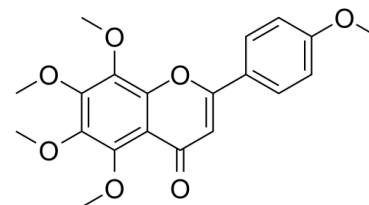


Data Sheet

Product Name:	Tangeretin
Cat. No.:	CS-5484
CAS No.:	481-53-8
Molecular Formula:	C ₂₀ H ₂₀ O ₇
Molecular Weight:	372.37
Target:	Apoptosis; Notch
Pathway:	Apoptosis; Neuronal Signaling; Stem Cell/Wnt
Solubility:	DMSO : 25 mg/mL (67.14 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

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]. **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].

PROTOCOL (Extracted from published papers and Only for reference)

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: [(absorbance of the test group – absorbance of the blank control)/(absorbance of the control group – absorbance of the blank control)] × 100. **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.

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. 2016 Mar 28.

CAIndexNames:

4H-1-Benzopyran-4-one, 5,6,7,8-tetramethoxy-2-(4-methoxyphenyl)-

SMILES:

O=C1C=C(C2=CC=C(OC)C=C2)OC3=C(OC)C(OC)=C(OC)C(OC)=C13

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

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