

## 5,7,3',4',5'-Pentamethoxyflavone

## Chemical Properties

CAS No.:	53350-26-8
Formula:	C <sub>20</sub> H <sub>20</sub> O <sub>7</sub>
Molecular Weight:	372.4
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).

## Biological Description

Description	3',4',5',5,7-Pentamethoxyflavone has anti-inflammatory and cancer chemopreventive activities. 3',4',5',5,7-Pentamethoxyflavone could be used as an effective adjuvant sensitizer to increase the efficacy of chemotherapeutic drugs by downregulating Nrf2 signaling pathway, it sensitizes Cisplatin-resistant A549 cells to Cisplatin by inhibition of Nrf2 pathway.
Targets(IC <sub>50</sub> )	Bcl-2: None Caspase: None IL Receptor: None NO: None Nrf2: None P-gp: None PARP: None
In vitro	<p>Bauhinia championii (Benth.) Benth. is a traditional medicinal plant used in China to treat rheumatoid arthritis (RA), especially in She ethnic minority group. This study focused on the active constituents from the rattan of B. championii (Benth.) Benth., which possess potential apoptosis effects. METHODS AND RESULTS: A conventional phytochemical separation method for the isolation of compounds from the ethyl acetate extract of B. championii was developed. The procedure involved extraction, liquid-liquid partitioning with ethyl acetate, and subsequent compound purification, respectively. Additionally, cell viability of dihydrokaempferol found abundantly in it was evaluated in vitro by MTS, and the antiapoptosis effect was evaluated by annexin V/PI staining (Flow Cytometry Analysis) and western blot. The results showed that nine flavonoids, and five other compounds, were isolated from the ethyl acetate extract of B. championii and were identified as <math>\beta</math>-sitosterol (1), 5,6,7,3',4',5'-hexamethoxyflavone (2), 3',4',5,7-tetrahydroxyflavone (3), 5,7,3',4',5'-Pentamethoxyflavone (4), 4'-hydroxy-5,7,3',5'-pentamethoxyflavone (5), apigenin (6), liquiritigenin (7), 5, 7-dihydroxycoumarin (8), 3',4',5,7,-pentamethoxyflavone (9), n-octadecanoate (10), lupine ketone (11), dibutylphthalate (12), dihydrokaempferol (13), and 5,7,3',5'-tetrahydroxy-6-methylflavanone (14). Among these compounds, 5-14 were isolated for the first time from B. championii. In addition, apoptosis effects of abundant dihydrokaempferol were evaluated in vitro. Dihydrokaempferol exhibited inhibitory effects on the proliferation of synoviocytes. Furthermore, dihydrokaempferol promoted Bax and Bad expression, as well as the cleavage of caspase-9, caspase-3, and PARP. Meanwhile, it inhibited Bcl-2 and Bcl-xL expression. CONCLUSIONS: These findings indicate that dihydrokaempferol isolated from the ethyl acetate extract of B. championii effectively promotes apoptosis, which is an important process through suppression of apoptotic activity. The results are encouraging for further studies on the use of B. championii in the treatment of RA.</p>

## Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble
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### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.685 mL	13.426 mL	26.853 mL
5 mM	0.537 mL	2.685 mL	5.371 mL
10 mM	0.269 mL	1.343 mL	2.685 mL
50 mM	0.054 mL	0.269 mL	0.537 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

### Reference

1. Apoptosis Effects of Dihydrokaempferol Isolated from Bauhinia championii on Synoviocytes. Evid Based Complement Alternat Med. 2018 Dec 2;2018:9806160.
2. Flavones as colorectal cancer chemopreventive agents--phenol-o-methylation enhances efficacy. Cancer Prev Res (Phila). 2009 Aug;2(8):743-50.

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