Natural Products

ChemFaces

Tangeretin Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Tangeretin

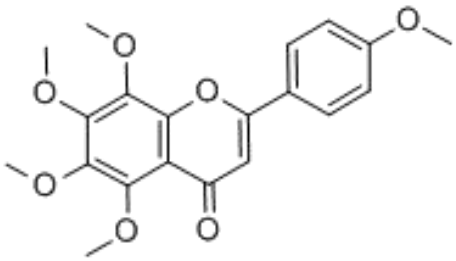
Catalog No.: CFN90240

Cas No.: 481-53-8

Purity: >=98%

M.F: $C_{20}H_{20}O_7$

M.W: 372.37



Physical Description: Powder

Synonyms:5,6,7,8-Tetramethoxy-2-(4-methoxyphenyl)-4-benzopyrone;

4',5,6,7,8-pentamethoxy-flavon.

[Intended Use]

1. Reference standards;
2. Pharmacological research;
3. Synthetic precursor compounds;
4. Intermediates & Fine Chemicals;
5. Others.

[Source]

The peel of *Citrus aurantium L.*

[Biological Activity or Inhibitors]

Tangeretin is a polymethoxylated flavonoid concentrated in the peel of citrus fruits, it exhibits anti-proliferative, anti-invasive, anti-metastatic, anti-inflammatory and antioxidant activities, it can suppress IL-1β-induced cyclooxygenase (COX)-2 expression through inhibition of p38 MAPK, JNK, and AKT activation in human lung carcinoma cells.[1]

Tangeretin inhibits growth of HL-60 cells in vitro, partially through induction of apoptosis, without causing serious side-effects on immune cells.[2]

Tangeretin either exerts its growth-inhibitory effects through modulation of the activities of several key G1 regulatory proteins, such as Cdk2 and Cdk4, or mediates the increase of Cdk inhibitors p21 and p27 in human colorectal carcinoma cells. [3]

Tangeretin can cross the blood-brain barrier, has significant protection of striato-nigral integrity and functionality, suggests its potential use as a neuroprotective agent.[4]

Tangeretin has nephroprotective nature, it can ameliorate oxidative stress in the renal tissues of rats with experimental breast cancer induced by 7,12-dimethylbenz [a]anthracene.[5]

Tangeretin sensitizes cisplatin-resistant human ovarian cancer cells through downregulation of phosphoinositide 3-kinase/akt signaling pathway.[6]

Tangeretin and nobiletin have antimicrobial activity against Pseudomonas, they inhibit the activities of succinate dehydrogenase (SDH) and malate dehydrogenase (MDH), and reduce proteins synthesis in bacterial cells.[7]

[Solvent]

Chloroform, Dichloromethane, Ethyl Acetate, DMSO, Acetone, etc.

[HPLC Method][8]

Mobile phase: Acetonitrile- H2O=45:55 ;

Flow rate: 1.0 ml/min;

Column temperature: 25 ℃;

The wave length of determination: 326 nm.

[Storage]

2-8℃, Protected from air and light, refrigerate or freeze.

[References]

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[2] Hirano T, Abe K, Gotoh M, *et al. Brit. J.Cancer, 1995, 72(6):1380-8.*

[3] Pan M H, Chen W J, Lin-Shiau S Y, *et al. Carcinogenesis, 2002, 23(10):1677-84.*

[4] Datla K P, Christidou M, Widmer W W, *et al. Neuroreport, 2001, 12(17):3871-5.*

[5] Lakshmi A, Subramanian S P. *Toxicol. Lett., 2014, 229(2):333-48.*

[6] Arafa E A, Zhu Q Z, Barakat B M, *et al. Cancer Res., 2009, 69(23):8910-7.*

[7] Yao X, Zhu X, Pan S, *et al. Food Chem., 2012, 132(4):1883-90.*

[8] Xu H, Chen H F, Jie L, *et al. Chinese Journal of Pharmaceutical Analysis, 2009, 29(9):1411-4.*

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