Natural Products

ChemFaces

Luteolin Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Luteolin

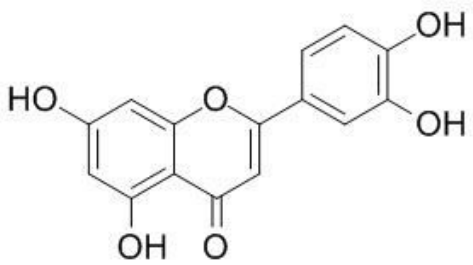
Catalog No.: CFN98784

Cas No.: 491-70-3

Purity: > 98%

M.F: $C_{15}H_{10}O_6$

M.W: 286.2



Physical Description: White powder

Synonyms: 2-(3,4-Dihydroxyphenyl)-5,7-dihydroxy-1-benzopyran-4-one.

[Intended Use]

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

[Source]

The leaves of *Dracocephalum ruyschiana L.*

[Biological Activity or Inhibitors]

Luteolin, is a common flavonoid that exists in many types of plants including fruits, vegetables, and medicinal herbs, has anti-oxidant, anti-inflammation, anti-allergy and anticancer, has been used in Chinese traditional medicine for treating various diseases such as hypertension, inflammatory disorders, and cancer. [1]

Luteolin can reduce production of proinflammatory mediators and inhibit LPS-induced IL-6 production in the brain by inhibiting the JNK signaling pathway and activation of AP-1 in microglia, also shows potent anti-inflammatory activities by inhibiting nuclear factor kappa B (NFkB) signaling in immune cells, thus, could be a promising candidate to develop immuno-modulatory and neuroprotective therapies for the treatment of neurodegenerative disorders.[2,3]

Luteolin induces apoptosis in various cancer cells, one mechanism through death receptor 5 (DR5) upregulation, treatment with luteolin might be promising as a new therapy against cancer. [4]

Luteolin attenuates TGF-β1-induced epithelial–mesenchymal transition of lung cancer cells by interfering in the PI3K/Akt–NF-κB–Snail pathway, strengthen the anti-cancer effects of flavonoid compounds via the regulation of migration/invasion and EMT ability of various cancer cells.[5]

[Solvent]

Chloroform, Dichloromethane, Diethyl ether, DMSO, Acetone, etc.

[HPLC Method][6]

Mobile phase: Acetonitrile- H2O=40:60;

Flow rate: 1.0 ml/min;

Column temperature: Room temperature;

The wave length of determination: 350 nm.

[Storage]

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

[References]

[1] Lin Y, Shi R, Wang X, *et al. Curr. Cancer Drug Tar., 2008, 8(7):634-46(13).*

[2] Jang S, Kelley K W, Johnson R W. *P. Natl .Acad. Sci. U.S.A., 2008, 105(21):7534-9.*

[3] Dirscherl K, Karlstetter M, Ebert S, *et al. J. Neuroinflamm., 2010, 7(1):1-16.*

[4] Horinaka M, Yoshida T, Shiraishi T, *et al. Oncogene, 2005, 24(48):7180-9.*

[5] Chen K C, Chen C Y, Lin C J, *et al. Life Sci., 2013, 93(24):924-33.*

[6] Chen X, Liu L, Sun Z, *et al. Biomed. Chromatogr., 2010, 24(8):826-32.*

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