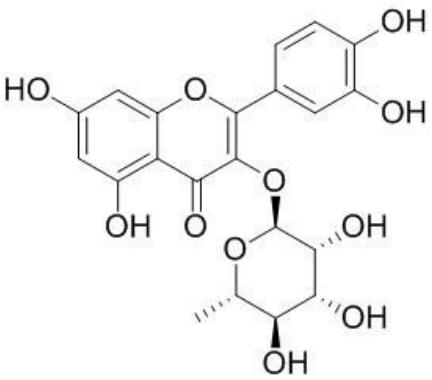
Natural Products

ChemFaces

Quercitrin Datasheet

4th Edition (Revised in July, 2016)

[Product Information]



Name: Quercitrin

Catalog No.: CFN98850

Cas No.: 522-12-3

Purity: > 98%

M.F: $C_{21}H_{20}O_{11}$

M.W: 448.4

Physical Description: Yellow powder

Synonyms:2-(3,4-Dihydroxyphenyl)-5,7-dihydroxy-3-[[(2S,3R,4R,5R,6S)-3,4,5-trihydroxy-6-methyl-2-oxanyl]oxy]-1-benzopyran-4-one.

[Intended Use]

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

[Source]

The herb of *Apocynum venetum L.*

[Biological Activity or Inhibitors]

Quercetin is a common antioxidant flavonoid found in vegetables, which is usually present in glycosylated forms, such as quercitrin (3-rhamnosylquercetin), has anti-inflammatory effect which is mediated through the inhibition of the NF-kappaB pathway, inhibits cytokine and inducible nitric oxide synthase expression through inhibition of the NF-kappaB pathway without modification of c-Jun N-terminal kinase activity. [1]

Quercetin has prevention of H2O2-induced apoptosis via anti-oxidant activity and heme oxygenase 1 gene expression in macrophages. [2]

Quercitrin exhibits a scavenger and antioxidant role, and these effects probably are mediated via different mechanisms, which may involve the negative modulation of the Fenton reaction and NMDA receptor. [3]

Quercetin(50 uM)can reduce UVB-induced cell death and apoptosis in HaCaT cells, also similarly reduce UVB-induced ROS generation and cell death in live zebrafish. [4]

Quercitrin exhibits strong antioxidant and anti-carcinogenic activities, it contributes to the inhibition of neoplastic transformation by blocking activation of the MAPK pathway and stimulation of cellular protection signaling. [5]

Quercitrin and Taxifolin can stimulate osteoblast differentiation in MC3T3-E1 cells and inhibit osteoclastogenesis in RAW 264.7 cells, shows a positive effect of these flavonoids on bone metabolism. [6]

[Solvent]

Pyridine, DMSO, Methanol, Ethanol, etc.

[HPLC Method] [7]

Mobile phase: Acetonitrile-0.5% Acetic acid H2O=17:83;

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] Comalada M, Camuesco D, Sierra S, *et al. Eur. J. Immun., 2005, 35(2):584–92.*

[2] Chow J M, Shen S C, Huan S K, *et al. Biochem. Pharmacol., 2005, 69(12):1839-51.*

[3] Wagner C, Fachinetto R, Corte C L D, *et al. Brain Res., 2006, 1107(1):192-8.*

[4] Yang H M, Ham Y M, Yoon W J, *et al. J. Photoch. Photobiol. B , 2012, 114(5):126-31*.

[5] Ding M, Zhao J, Bowman L, *et al. Int. J. Oncol., 2010, 36(1):59-67*.

[6] Satué M, Arriero M D M, Monjo M, *et al. Biochem. Pharmacol., 2013, 86(10):1476-86.*

[7] Li J, Wang Z W, Zhang L, *et al. Biomed. Chromatogr., 2008, 22(4):374-8.*

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