Natural Products

ChemFaces

Chicoric acid Datasheet

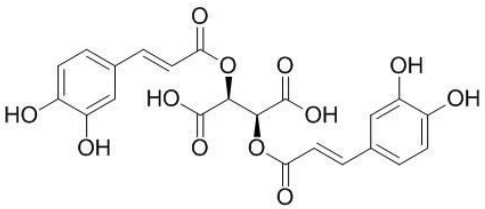
4th Edition (Revised in July, 2016)

[Product Information]

Name: Chicoric acid

Catalog No.: CFN99725

Cas No.: 70831-56-0



Purity: >=98%

M.F: $C_{22}H_{18}O_{12}$

M.W: 474.37

Physical Description: White powder

Synonyms: (2R,3r)-2,3-bis[[(e)-3-(3,4-dihydroxyphenyl)prop-2-enoyl]oxy]butanedioic acid;Dicaffeoyl Tartaric acid ;L-Cichoric acid.

[Intended Use]

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

[Source]

The herbs of *Echinacea purpurea.*

[Biological Activity or Inhibitors]

Use of chicoric acid and lactic bacterium in food supplement can regulate skin pigmentation, it could be provided a skin lightening agent.[1]

L-Chicoric acid has antiviral activity against HIV-1, which has been attributed to the inhibition of HIV-1 integration.[2]

Chicoric acid, a new compound able to enhance insulin release and glucose uptake, it is a new potential antidiabetic agent carrying both insulin sensitizing and insulin-secreting properties. [3]

Chicoric acid and luteolin can synergistically inhibit inflammatory responses via inactivation of PI3K-Akt pathway and impairment of NF-κB translocation in lipopolysaccharide (LPS) stimulated RAW 264.7 cells.[4]

Chicoric acid can induce apoptosis in 3T3-L1 preadipocytes through ROS-mediated PI3K/Akt and MAPK signaling pathways, it has antiobesity effects.[5]

[Solvent]

Pyridine, DMSO, Methanol, Ethanol, etc.

[HPLC Method][6]

Mobile phase: Acetic acid- H2O- Acetonitrile=2:84:14 ;

Flow rate: 1.2 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 254 nm.

[Storage]

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

[References]

[1] Guitard M, Bel Rhlid R, Moodycliffe A, *et al. WO2011EP60769.*

[2] Pluymers W, Neamati N, Pannecouque C, *et al. Mol. Pharmacol., 2000, 58(3):641-8.*

[3] Tousch D, Lajoix A D, Hosy E, *et al. Biochem. Biophy. Res. Co., 2008, 377(1):131-5.*

[4] Park C M, Jin K S, Lee Y W, *et al. Eur. J. Pharmacol., 2011, 660(2–3):454-9.*

[5] Xiao H, Wang J, Yuan L, *et al. J.Agr. Food Chem., 2013, 61(7):1509-20.*

[6] Haznedaroglu M Z, Zeybek U. *Pharm. Biol., 2008, 45(10):745-8.*

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