Natural Products

ChemFaces

Isoferulic acid Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Isoferulic acid

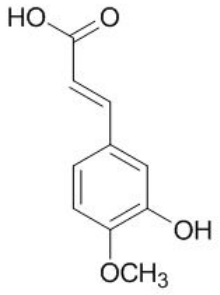
Catalog No.: CFN98282

Cas No.: 25522-33-2

Purity: >=98%

M.F: $C_{10}H_{10}O_4$

M.W: 194.18



Physical Description: Powder

Synonyms: (E)-3'-hydroxy-4'-methoxycinnamic acid;trans-Isoferulic acid;

(E)-3-(3-Hydroxy-4-methoxyphenyl)propenoic acid;

trans-3-(3-Hydroxy-4-methoxyphenyl)acrylic acid.

[Intended Use]

1. Reference standards;

2. Pharmacological research;

3. Cosmetic research;

4. Synthetic precursor compounds;

5. Intermediates & Fine Chemicals;

6. Others.

[Source]

The roots of *Cimicifuga foetida L.*

[Biological Activity or Inhibitors]

Isoferulic acid (IFA) and ferulic acid(FA) are active components of the rhizoma of Cimicifuga species used frequently as anti-inflammatory drugs in Japanese Oriental medicines, have inhibitory effect on murine interleukin-8 production in response to influenza virus infections in vitro and in vivo; suggests that FA and IFA are novel and potent inhibitors of murine IL-8 production and might act as one of the main components of anti-inflammatory rhizoma of Cimicifuga species.[1]

Isoferulic acid can inhibit hepatic gluconeogenesis and/or increase the glucose utilization in peripheral tissue to lower plasma glucose in diabetic rats lacking insulin.[2]

Isoferulic acid is an effective natural antioxidant in both lipid and aqueous media. [3]

Isoferulic acid may be a new promising anti-glycation agent for the prevention of diabetic complications via inhibition of advanced glycation end products (AGEs) formation and oxidation-dependent protein damage.[4]

Isoferulic acid has inhibitory effect on mushroom tyrosinase.[5]

[Solvent]

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

[HPLC Method][6]

Mobile phase: Methanol-H2O-Phosphoric acid =50:150:0.1 ;

Flow rate: 1.0 ml/min;

Column temperature: 24 ℃;

The wave length of determination: 320 nm.

[Storage]

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

[References]

[1] Hirabayashi T, Ochiai H, Sakai S, *et al. Planta Med., 1995, 61(3):221-6.*

[2] Liu I M, Hsu F L, Chen C F, *et al. Brit. J.Pharmacol., 2000, 129(4):631-6.*

[3] Wang X, Li X, Chen D. *Nat. Prod. Co., 2011, 6(9):1285-8.*

[4] Meeprom A, Sompong W, Chan C B, *et al. Molecules, 2013, 18(6):6439-54.*

[5] Gong S, Yin M, Yun Z. *J. Cosmetic Sci., 2013, 64(4):235-41.*

[6] Tayeb J S, Provenzano R, El-Ghoroury M, *et al. Chinese Journal of Pharmaceutical Analysis, 2000, 35(4):606–10.*

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