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4-Methoxycinnamic acid Datasheet

5th Edition (Revised in January, 2017)

[Product Information]

Name: 4-Methoxycinnamic acid

Catalog No.: CFN98191

Cas No.: 830-09-1

Purity: >=99%

M.F: C₁₀H₁₀O₃

M.W: 178.18

Physical Description: White powder

Synonyms:3-(4-Methoxyphenyl)acrylic acid; (2E)-3-(4-methoxyphenyl)prop-2-enoic acid;

p-Methoxycinnamic 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 barks of Cinnamomum cassia Presl.

[Biological Activity or Inhibitors]

4-Methoxycinnamic acid is a photosensitive compound.^[1]

p-Methoxycinnamic acid shows various pharmacologic actions such as hepatoprotective and antihyperglycemic activities, it also can stimulate insulin secretion from pancreatic β -cells by increasing Ca²⁺ influx via the L-type Ca²⁺ channels, but not through the closure of ATP-sensitive K⁺ channels.^[2]

4-Methoxycinnamic acid can strongly inhibit the diphenolase activity of mushroom tyrosinase, with the IC ₅₀ value of 0.42 mM, and the inhibition is reversible.^[3]

p-Methoxycinnamic acid has protective effectan active phenolic acid against 1,2-

dimethylhydrazine-induced colon carcinogenesis by modulating biotransforming bacterial enzymes and xenobiotic metabolizing enzymes.^[4]

[Solvent]

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

[HPLC Method]^[5]

Mobile phase: 0.01% Formic acid in water- 0.07% Formic acid in 30% acetonitrile, gradient elution ;

Flow rate:1.0 ml/min;

Column temperature: 30°C;

The wave length of determination:260 nm.

[<u>Storage</u>]

 $2-8^{\circ}$ C, Protected from air and light, refrigerate or freeze.

[References]

[1] Park J J, Jang E J, Jun S A, et al. US 8758864 B2[P]. 2014.

[2] Adisakwattana S, Hsu W H, Yibchokanun S. *Horm. Metab. Res., 2011 Oct; 43(11):* 766-73.

[3] Shi Y, Chen Q X, Wang Q, et al. Food Chem., 2005, 92(4):707-12.

[4] Gunasekaran S, Venkatachalam K, Jeyavel K, et al. Mol. Cell. Biochem., 2014 Sep;

394(1-2):187-98.

[5] Wu B, Szymanski W, Wietzes P, et al. Chembiochem, 2009,10(2):338-44.

[Contact]

Address: S5-3 Building, No. 111, Dongfeng Rd., Wuhan Economic and Technological Development Zone, Wuhan, Hubei 430056, China Email: info@chemfaces.com Tel: +86-27-84237783 Fax: +86-27-84254680 Web: www.chemfaces.com Tech Support: service@chemfaces.com