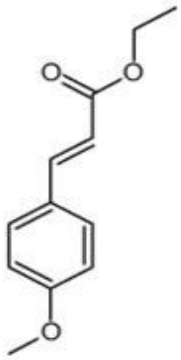
*Natural Products*

ChemFaces

# Ethyl 4-methoxycinnamate Datasheet

5th Edition (Revised in January, 2017)

## [ Product Information ]



**Name:** Ethyl 4-methoxycinnamate

**Catalog No.:** CFN98180

**Cas No.:** 24393-56-4

**Purity:**>= 98%

**M.F:** $C_{12}H_{14}O_3$

**M.W:** 206.24

**Physical Description:** Powder

**Synonyms:**Methoxycinnamicacidethylester;Ethyl-p-methoxycinnamate;Ethyl trans-4-methoxycinnamate; Ethyl 3-(4-Methoxyphenyl) acrylate.

## [ Intended Use ]

1. Reference standards;
2. Pharmacological research;
3. Food and cosmetic research;
4. Cosmetic research;
5. Synthetic precursor compounds;
6. Others.

## [ Source ]

The herb of *Kaempferia galangal L.*

## [ Biological Activity or Inhibitors]

Ethyl p-methoxycinnamate(Ethyl 4-methoxycinnamate) has antifungal activity, it can inhibit the growth of *Trichophyton rubrum, Aspergillus niger, Saccharomyces cerevisiae* and *Epidermophyton floccosum* at a concentration less than 10 mug/ml.[1]

Ethyl p-methoxycinnamate has chemopreventive activity against fibrosarcoma through inhibition of COX-2.[2]

Ethyl-p-methoxycinnamate has anti-inflammatory, it can dose-dependently inhibit carrageenan-induced edema with an MIC of 100 mg/kg, and non-selectively inhibit the activities of cyclooxygenases 1 and 2, with $IC_{50}$ values of 1.12 uM and 0.83 uM respectively. [3]

Ethyl p-methoxycinnamate can significantly decrease melanin synthesis in B16F10 murine melanoma cells stimulated with α-melanocyte stimulating hormone (α-MSH), the pigment-inhibitory effect of ethyl p-methoxycinnamate results from downregulation of tyrosinase, it could be developed as a skin whitening agent to treat hyperpigmentary disorders.[4]

trans-Ethyl p-methoxycinnamate can specifically inhibit the migration and tube formation of human umbilical vein endothelial cells , it can block bFGF-induced vessel formation on Matrigel plug assay in vivo.[5]

Ethyl p-methoxycinnamate has cytotoxic activity against human breast cancer (MCF-7) cell line.[6]

## [ Solvent ]

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

## [ HPLC Method ][7 ]

Mobile phase: 0.2% Acetic acid in water- Methanol,gradient elution ;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 270 nm.

## [ Storage ]

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

## [ References ]


[1] Gupta S K, Banerjee A B, Achari B. *Lloydia, 1976, 39(4):218-22.*

[2]Ekowati J, Tejo B A, Sasaki S, *et al. Int. J. Pharm. Pharm.Sci., 2012, 4:528-32.*

[3] Umar M I, Asmawi M Z, Sadikun A, *et al. Molecules, 2012, 17(7):8720-34.*

[4] Ko H J, Kim H J, Kim S Y*, et al. Phytother. Res., 2014, 28(2):274-9.*

[5] He Z H, Yue G G, Lau C B, *et al. J.Agr. Food Chem., 2012, 60(45):11309-17.*

[6] Omar M N, Hasali N H M, Yarmo M A. *Oriental Journal of Chemistry, 2016, 32(5): 2731-4.*

[7] Wu Y H, Huang M Q, Li Z M,*et al. Chinese Traditional Patent Medicine, 2006, 28(4): 492-5.*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