



Caffeic acid phenethyl ester Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Caffeic acid phenethyl ester

Catalog No.: CFN90554

Cas No.: 104594-70-9

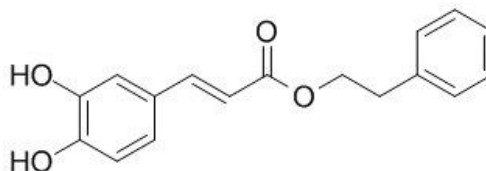
Purity: >=98%

M.F: C₁₇H₁₆O₄

M.W: 284.31

Physical Description: Powder

Synonyms: Phenethyl caffeate; 2-Phenylethyl 3-(3,4-dihydroxyphenyl)-2-propenoate.



[Intended Use]

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

[Source]

The barks of *Cinnamomum cassia* Presl.

[Biological Activity or Inhibitors]

Caffeic acid phenethyl ester (CAPE), an active component of propolis from honeybee hives, is known to have anti-mitogenic, anticarcinogenic, antiinflammatory, and immunomodulatory properties; it is a potent and a specific inhibitor of NF-kappa B activation and this may provide the molecular basis for its multiple immunomodulatory and antiinflammatory activities. ^[1]

Caffeic acid phenethyl ester as a lipoxygenase inhibitor with antioxidant properties, it completely blocks production of reactive oxygen species in human neutrophils and the xanthine/xanthine oxidase system at a concentration of 10 uM. ^[2]

Caffeic acid phenethyl ester and caffeic acid(CA) can suppress the growth of HepG2 tumor xenografts in nude mice in vivo, the subcutaneous and oral administrations of CA and CAPE significantly reduced the liver metastasis; these results confirm the therapeutic potential of the compounds and suggest that the anti-metastatic and anti-tumor effects of CA and CAPE are mediated through the selective suppression of MMP-9 enzyme activity and transcriptional down-regulation by the dual inhibition of NF-κB as well as MMP-9 catalytic activity. ^[3]

Caffeic acid phenethyl ester induces apoptosis by inhibition of NFκappaB and activation of Fas in human breast cancer MCF-7 cells. ^[4]

Caffeic acid phenethyl ester can protect kidneys against carbon tetrachloride toxicity in rats. ^[5]

Caffeic acid phenethyl ester has protective effect on lipid peroxidation and antioxidant enzymes in diabetic rat liver. ^[6]

Caffeic acid phenethyl ester treatment which prevents free radical production and ameliorates seizure severity may be useful at least as an adjunctive treatment of seizure disorders. ^[7]

Caffeic acid phenethyl ester and related compounds have inhibition of HIV-1 integrase. ^[8]

[Solvent]

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

[HPLC Method]^[9]

Mobile phase: Methanol- H₂O, gradient elution;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination:320 nm.

[Storage]

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

[References]

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