Natural Products

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Pinoresinol Datasheet

4th Edition (Revised in July, 2016)

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[Product Information]

Name: Pinoresinol

Catalog No.: CFN98775

Cas No.: 487-36-5

Purity: > 98%

M.F: C₂₀H₂₂O₆

M.W: 358.4

Physical Description: Powder

Synonyms:4-[(3S,3aR,6S,6aR)-6-(4-hydroxy-3-methoxyphenyl)-1,3,3a,4,6,6a-hexahydr ofuro[3,4-c]furan-3-yl]-2-methoxyphenol.

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[Intended Use]

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

[Source]

The bark of Eucommia ulmoides Oliver.

[Biological Activity or Inhibitors]

Pinoresinol, among plant lignans, has the strongest antiinflammatory properties by acting on the NF- κ B signaling pathway in human intestinal Caco-2 cells.^[1]

Pinoresinol-Rich Olives has chemopreventive, anticancer and anti-Inflammatory effects.^[2] Pinoresinol, a lignan of wide distribution in plants, is found to occur as a minor component in the defensive secretion produced by glandular hairs of caterpillars of the cabbage butterfly, Pieris rapae, serves for defense in a caterpillar.^[3]

Pinoresinol can ameliorate CCl4-induced acute liver injury, and this protection is likely due to anti-oxidative activity and down-regulation of inflammatory mediators through inhibition of NF-kappaB and activating protein 1 (AP-1).^[4]

(+)-Pinoresinol possesses fungicidal activities and therapeutic potential as an antifungal agent for the treatment of fungal infectious diseases in humans.^[5]

[Solvent]

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

[HPLC Method]^[6]

Mobile phase: Methanol- H2O=20:80; Flow rate: 1.0 ml/min; Column temperature: 40 ℃; The wave length of determination: 227 nm.

[Storage]

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

[References]

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- [3] Schroeder F C, Eisner T. P. Natl. Acad. Sci. U.S.A., 2006, 103(42):15497-501.

[4] Kim H Y, Kim J K, Choi J H, et al.J. Pharmacol. Sci., 2010, 112(1):105-12.

[5] Hwang B, Lee J, Liu Q H, et al. Molecules, 2010, 15(5):3507-16.

[6] Lin B, Shuai N. Chinese Journal of Drug Application & Monitoring, 2013(03):147-9.

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