

Honokiol Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Honokiol

Catalog No.: CFN99902

Cas No.: 35354-74-6

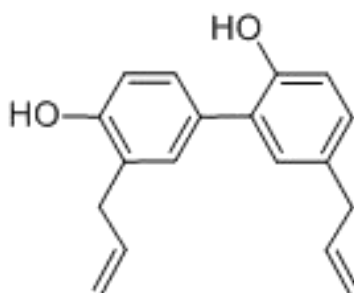
Purity: > 98%

M.F: C₁₈H₁₈O₂

M.W: 266.33

Physical Description: Powder

Synonyms: 3,5'-Diallyl-4,2'-dihydroxybiphenyl; 3',5-di(prop-2-en-1-yl)biphenyl-2,4'-diol.



[Intended Use]

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

[Source]

The barks of *Magnolia officinalis*.

[Biological Activity or Inhibitors]

Honokiol and magnolol are the main constituents simultaneously identified in the barks of *Magnolia officinalis*, which have been used in traditional Chinese medicine to treat a variety of mental disorders including depression, the mixture of honokiol and magnolol possess potent antidepressant-like properties in behaviors involved in normalization of biochemical abnormalities in brain 5-HT and 5-HIAA, serum corticosterone levels and platelet AC activity in the CMS rats.^[1]

Honokiol inhibits angiogenesis in vitro and tumor growth in vivo, it is a systemically available and non-toxic inhibitor of angiogenesis and should be further evaluated as a potential chemotherapeutic agent.^[2]

Honokiol overcomes conventional drug resistance in human multiple myeloma by induction of caspase-dependent and -independent apoptosis.^[3]

Honokiol and magnolol exhibit free radical scavenging activities as shown by the diphenyl-p-picrylhydrazyl assay, but they are less potent than α -tocopherol.^[4]

Honokiol and magnolol show strong antibacterial activities against both *Propionibacterium acnes* and *Propionibacterium granulosum*, which are acne-causing bacteria; they exhibit cytotoxic effects when triclosan was employed as an acne-mitigating agent; they reduce secretion of interleukin-8 and tumor necrosis factor α (TNF- α) induced by *P. acnes* in THP-1 cells indicating the anti-inflammatory effects of them; suggest the possibility that magnolol and honokiol may be considered as attractive acne-mitigating candidates for topical application.^[5]

Honokiol has antioxidant activity, it protects rat brain from focal cerebral ischemia – reperfusion injury by inhibiting neutrophil infiltration and reactive oxygen species production.^[6,7]

Honokiol has antimicrobial activity, including antifungal activity.^[8,9]

Honokiol and magnolol have neuroprotective effects, the effects may be related to their anti-oxidative actions and antagonism of excitotoxicity induced by excitatory amino acids, suggests that they may be potential therapeutic agents for neurodegenerative diseases.^[10]

[Solvent]

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

[HPLC Method]^[11]

Mobile phase: Acetonitrile- 0.05% Formic acid H₂O =60:40 ;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 254 nm.

[Storage]

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

[References]

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- [2] Bai X, Cerimele F, Ushiofukai M, *et al. J. Biol. Chem.*, 2003, 278(37):35501-7.
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- [11] Shi Z, Li Z, Qiu L, *et al. J. Liq. Chromatogr. R. T.*, 2015, 38(6):722-8.

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