

Bakuchiol Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Bakuchiol

Catalog No.: CFN99047

Cas No.: 10309-37-2

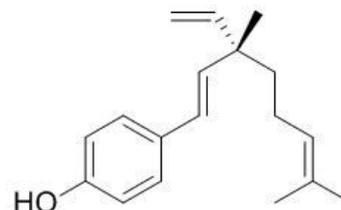
Purity: > 98%

M.F: C₁₈H₂₄O

M.W: 256.4

Physical Description: Oil

Synonyms: 4-[(1E,3S)-3-ethenyl-3,7-dimethylocta-1,6-dienyl]phenol.



[Intended Use]

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

[Source]

The bark of *Psoralea corylifolia*.

[Biological Activity or Inhibitors]

Bakuchiol is isolated from the seeds of *Psoralea corylifolia*, a tree native to China with various uses in traditional medicine, it shows bactericidal effects against all bacteria tested, including *S. mutans*, *Streptococcus sanguis*, *Streptococcus salivarius*, *Streptococcus sobrinus*, *Enterococcus faecalis*, *Enterococcus faecium*, *Lactobacillus acidophilus*, *Lactobacillus casei*, *Lactobacillus plantarum*, *Actinomyces viscosus*, and *Porphyromonas gingivalis*, with MICs ranging from 1 to 4 microg/ml and the sterilizing concentration for 15 min ranging from 5 to 20 microg/ml; furthermore, bakuchiol is also effective against adherent cells of *S. mutans* in water-insoluble glucan in the presence of sucrose and inhibited the reduction of pH in the broth; thus, bakuchiol would be a useful compound for development of antibacterial agents against oral pathogens and has great potential for use in food additives and mouthwash for preventing and treating dental caries.^[1]

Bakuchiol analogs, especially $\Delta^3,2$ -hydroxybakuchiol, are monoamine transporter inhibitors involved in regulating dopaminergic and noradrenergic neurotransmission and may have represented potential pharmacotherapies for disorders such as Parkinson's disease, depression, and cocaine addiction.^[2]

Bakuchiol and *Psoralea corylifolia* L. (PCE) treatments reduce postmenopausal bone loss by increasing alkaline phosphatase, Ca concentrations, serum E2 concentration and bone mineral density, and by decreasing the inorganic P level, indicates that bakuchiol and PCE treatments could protect against bone loss.^[3]

Bakuchiol is a phenolic isoprenoid with novel enantiomer-selective anti-Influenza A virus activity involving Nrf2 activation.^[4]

Bakuchiol is a hepatoprotective compound of *psoralea corylifolia* on tacrine-induced cytotoxicity in Hep G2 cells.^[5]

Bakuchiol derivatives are novel and potent cytotoxic agents.^[6]

[Solvent]

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

[HPLC Method]^[7]

Mobile phase: Methanol-H₂O, gradient elution;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 260 nm.

[Storage]

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

[References]

- [1] Katsura H, Tsukiyama R I, Suzuki A, *et al. Antimicrob. Agents Ch.*, 2001, 45(11): 3009-13.
- [2] Zhao G, Zang S Y, Zheng X W, *et al. Biochem. Pharmacol.*, 2008, 75(9):1835-47.
- [3] Lim S H, Ha T Y, Kim S R, *et al. Brit. J. Nutr.*, 2009, 101(7):1031-9.
- [4] Shoji M, Arakaki Y, Esumi T, *et al. J. Biol. Chem.*, 2015, 290(46):28001-17.
- [5] Cho H, Jun J Y, Song E K, *et al. Planta Med.*, 2001, 67(8): 750-1.
- [6] Majeed R, Reddy M V, Chinthakindi P K, *et al. Eur. J. Med. Chem.*, 2012, 49(1):55-67.
- [7] Jeong M, Hong T, Lee K, *et al. J. Aoac Int.*, 2015, 98(4):902-6.

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