Natural Products

ChemFaces

Bavachinin Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Bavachinin

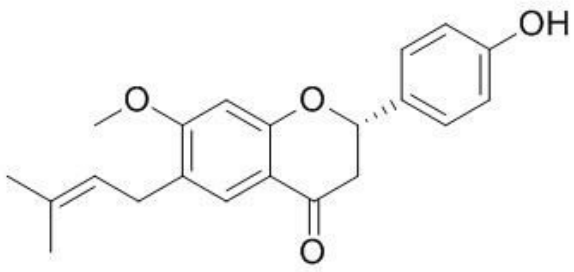
Catalog No.: CFN98006

Cas No.: 19879-30-2

Purity: > 98%

M.F: $C_{21}H_{22}O_4$

M.W: 338.4



Physical Description: Oil

Synonyms: Bavachinin A; 7-O-Methylbavachin; 2-(4-hydroxyphenyl)-7-methoxy-6-(3-methylbut-2-enyl)-3,4-dihydro-2H-1-benzopyran-4-one;4'-Hydroxy 7-methoxy 6-(3-methyl 2-butenyl)flavanone.

[Intended Use]

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

[Source]

The seeds of *Psoralea corylifolia L.*

[Biological Activity or Inhibitors]

Bavachinin(BVC), a flavanone isolated from seeds of Psoralea corylifolia Linn., has antiinflammatory, antipyretic and analgesic properties.[1]

Bavachinin has potent anti-angiogenic activity in vitro and in vivo; it inhibits increases in HIF-1αactivity in human KB carcinoma (HeLa cell derivative) and human HOS osteosarcoma cells under hypoxia in a concentration-dependent manner, probably by enhancing the interaction between von Hippel-Lindau (VHL) and HIF-1α; indicates that BVC could be used as a therapeutic agent for inhibiting tumor angiogenesis. [2]

Bavachinin, which can be isolated from the Chinese herb Fructus Psoraleae, has the potential as a potent anti-asthma drug. [3]

Bavachinin has been reported to demonstrate peroxisome proliferator-activated receptor-γ (PPAR-γ) agonist activity, (S)- and (R)-bavachinin demonstrate similar PPAR-γ agonist activities; BVC exhibits glucose-lowering properties without inducing weight gain and hepatotoxicity, BVC synergised with thiazolidinediones, which are synthetic PPAR-γ agonists, and fibrates, which are PPAR-α agonists, to induce PPAR transcriptional activity, as well as to lower glucose and triacylglycerol levels in db/db mice. [4,5]

[Solvent]

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

[HPLC Method][6]

Mobile phase: Acetonitrile-5 mM Monopotassium phosphate buffer, gradient elution ;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 238 nm.

[Storage]

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

[References]

[1] Anand K K, Sharma M L, Singh B, *et al. Indian J. Exp. Biol., 1978, 16(11):1216-7.*

[2] Manoj Nepal, Hwa Jung Choi, Bo-Yun Choi,*et al. Eur. J. Pharmacol., 2012, 691(1-3): 28-37.*

[3] Chen X, Shen Y, Liang Q, *et al. Int. Immunopharmacol., 2014, 19(2):399-404.*

[4] Du G, Li F, Zhuo Y, *et al. Bioorg .Med. Chem. Lett., 2015, 25(12):2579-83.*

[5] Li F, Luo H, Xu Z, *et al. Diabetologia, 2016, 59(6):1276-86.*

[6] Liu L, Wen Y B, Liu K N, *et al. Chinese Journal of Pharmaceutical Analysis, 2012, 32(2):206-9.*

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