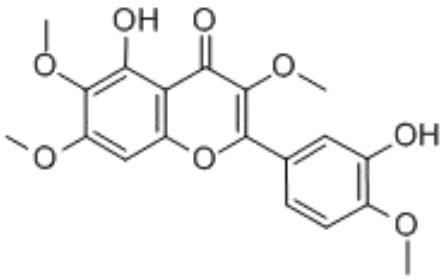
Natural Products

ChemFaces

Vitexicarpin Datasheet

4th Edition (Revised in July, 2016)

[Product Information]



Name: Vitexicarpin

Catalog No.: CFN98172

Cas No.: 479-91-4

Purity: >=98%

M.F: $C_{19}H_{18}O_8$

M.W: 374.34

Physical Description: Yellow powder

Synonyms:4H-1-benzopyran-4-one,5-hydroxy-2-(3-hydroxy-4-methoxyphenyl)-3,6,7-trimethoxy-;5-Hydroxy-2-(3-hydroxy-4-methoxyphenyl)-3,6,7-trimethoxy-4H-chromen-4-on; 5-Hydroxy-2-(3-hydroxy-4-méthoxyphényl)-3,6,7-triméthoxy-4H-chromén-4-one; Casticin.

[Intended Use]

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

[Source]

The fruits of *Vitex trifolia L. var. simplicifolia Cham.*

[Biological Activity or Inhibitors]

Vitexicarpin, isolated from the leaves of Vitex negundo, exhibits broad cytotoxicity in a human cancer cell line panel. [1]

Vitexicarpin can inhibit T-lymphocyte proliferation as well as B-lymphocyte proliferation, the inhibitory activity of vitexicarpin is reversible; it also can inhibit the growth of certain cancer cell lines, EL-4 and P815.9 (IC50 = 0.25-0.3 08M); suggests that vitexicarpin may be a potential therapeutic agent involved in inflammatory/immunoregulatory disorders such as rheumatoid arthritis and lymphomas.[2]

Vitexicarpin and viteosin-A block spontaneous contraction of isolated male trachea induced by , however only vitexicarpin is active in a model using sensitized trachea stimulated by up to minimum dose of 1.3 x $10^{(-5)}$ M; suggests that vitexicarpin is able to block effects of released from sensitized mast cells possibly by stabilizing the mast function.[3]

Vitexicarpin has shown antitumor, anti-inflammatory, and immunoregulatory properties;it also can act as a novel angiogenesis inhibitor, it exerts good antiangiogenic effects by inhibiting vascular-endothelial-growth-factor-(VEGF-) induced endothelial cell proliferation, migration, and capillary-like tube formation on matrigel in a dose-dependent manner, it also has an antiangiogenic mechanism through inhibition of cell cycle progression and induction of apoptosis. [4]

Vitexicarpin inhibits overexpression of GNAO1 and plays a role in gastric cancer cell proliferation and apoptosis, vitexicarpin treated inhibition of GNAO1 can be a potential therapeutic strategy for the treatment of gastric cancer.[5]

[Solvent]

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

[HPLC Method][6]

Mobile phase: Acetonitrile- 50 mM Potassium dihydrogen phosphate solution (pH value adjusted to 3.0 with phosphoric acid)=50:50;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 254 nm.

[Storage]

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

[References]

[1] Díaz F, Chávez D, Lee D, *et al. J. Nat. Prod., 2003, 66(6):865-7.*

[2] You K M, Son K H, Chang H W, *et al. Planta Med., 1998, 64(6):546-50.*

[3] Alam G, Wahyuono S, Ganjar I G, *et al. Planta Med, 2002, 68(11):1047-9.*

[4] Zhang B, Liu L, Zhao S, *et al. Evid.-Based Compl. Alt., 2013, 2013(9):221-9.*

[5] Wang S P, Yu L, Xie J, *et al. Bangl. J. Pharmacol., 2015, 10(1):63-8.*

[6] Yang R Z, Zhong M X, Zhong X M. *China Pharmacy, 2011, 22(47):4489-90.*

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