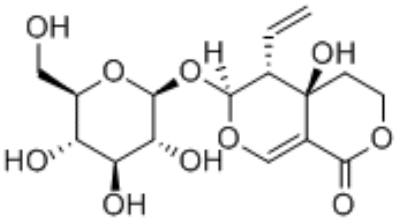
Natural Products

ChemFaces

Swertiamarin Datasheet

4th Edition (Revised in July, 2016)

[Product Information]



Name: Swertiamarin

Catalog No.: CFN99818

Cas No.: 17388-39-5

Purity: >=98%

M.F: $C_{16}H_{22}O_{10}$

M.W: 374.34

Physical Description: Powder

Synonyms: Swertiamarine; Swertiamaroside; 1H,3H-Pyrano(3,4-c)pyran-1-one,5-ethenyl-6-(beta-d-glucopyranosyloxy)-4,4a,5,6-tetrahydro-4a-hydroxy-,(4aR,5R,6S)-; (5R,6S)-5-ethenyl-4a-hydroxy-1-oxo-4,4a,5,6-tetrahydro-1H,3H-pyrano[3,4-c]pyran-6-yl beta-D-glucopyranoside.

[Intended Use]

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

[Source]

The herbs of *Swertia bimaculata.*

[Biological Activity or Inhibitors]

Swertiamarin, a secoiridoid glycoside was found to contain a major constituent of the extract, possesses significant antioxidant and hepatoprotective properties against d-GalN induced hepatotoxicity given at 100 and 200 mg/kg body weight orally for 8 days, which might be due to its in vitro antioxidant activity.[1]

Swertiamarine has wound healing activity via the stimulation of collagen production and its mitotic activity, it also exhibits cytoprotective effects.[2]

Swertiamarin can significantly increase high-density lipoprotein (HDL) levels and it shows a significant lipid-lowering effect, as well as a high antiatherogenic potential, overall swertiamarin is an effective lipid-lowering lead compound and can be useful for preventing atherosclerosis. [3]

Swertiamarin possesses both peripheral and central antinociceptive activity.[4]

Swertiamarin has anti-inflammatory activity, it inhibits the development of arthritis by modulating NF-κB/IκB and JAK2/STAT3 signaling, suggests that swertiamarin acts as an anti-rheumatic agent.[5]

Swertiamarin has anti-diabetic effects, the anti-diabetic effect of swertiamarin is due to gentianine, an active metabolite of swertiamarin.[6]

Swertiamarin stimulates gastric emptying and gastrointestinal motility by inhibiting the dopamine D2 receptor.[7]

[Solvent]

Pyridine, Methanol, Ethanol, etc.

[HPLC Method][8]

Mobile phase: 0.04% Formic acid in water- 0.04% Formic acid in acetonitrile,gradient elution ;

Flow rate: 1.0 ml/min;

Column temperature: 30 ℃;

The wave length of determination: 237 nm.

[Storage]

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

[References]

[1] Jaishree V, Badami S. *J. Ethnopharmacol., 2010, 130(1):103-6.*

[2] Oztürk N, Korkmaz S, Oztürk Y, *et al. Planta Med., 2006, 72(4):289-94.*

[3] Vaidya H, Rajani M, Sudarsanam V, *et al. J. Nat. Med., 2009, 63(4):437-42.*

[4] Jaishree V, Badami S, Kumar M R, *et al. Phytomed. Int. J. Phytother. Phytopharmacol., 2009, 16(2-3):227-32.*

[5] Saravanan S, Islam V I H, Babu N P, *et al. Eur. J. Pharmaceut. Sci., 2014, 56(1):70-86.*

[6] Vaidya H, Goyal R K, Cheema S K. *Phytother. Res., 2012, 27(4):624-7.*

[7] Kimura Y, Sumiyoshi M. *Fitoterapia, 2011, 82(6):827-33.*

[8] Chang J, Zhao X M, Liu C X, *et al. Biomed. Chromatogr., 2008, 22(2):191–5.*

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