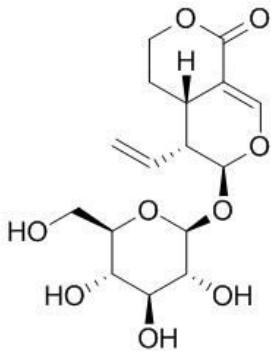
Natural Products

ChemFaces

Sweroside Datasheet

4th Edition (Revised in July, 2016)

[Product Information]



Name: Sweroside

Catalog No.: CFN99455

Cas No.: 14215-86-2

Purity: > 98%

M.F: $C_{16}H_{22}O_9$

M.W: 358.3

Physical Description: Powder

Synonyms:(3S,4R,4aS)-4-ethenyl-3-[[(2S,3R,4S,5S,6R)-3,4,5-trihydroxy-6-(hydroxymethyl)-2-oxanyl]oxy]-4,4a,5,6-tetrahydro-3H-pyrano[3,4-c]pyran-8-one.

[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]

Sweroside and swertiamarine are main constituents in Gentian (Gentiana lutea ssp. symphyandra), Gentian has wound healing activity, seems to be mainly due to the increase in the stimulation of collagen production and the mitotic activity by sweroside and swertiamarine , respectively; they also have cytoprotective effects, which may cause a synergism in terms of wound healing activity of Gentian. [1]

Sweroside has the anti-osteoporotic effect on the MG-63 cells and osteoblasts, it has a direct osteogenic effect on the proliferation and differentiation of cultured MG-63 cells and osteoblasts in vitro. [2]

Sweroside can inhibit potent melanogenesis in melan-a cells at 300uM without cytotoxicity, also decreases tyrosinase, tyrosinase-related protein-1 (TRP-1) and TRP-2 protein production in melan a cells, it may be an effective skin-whitening agent through the regulates the expression of MAP kinase and melanogenic enzymes. [3]

Sweroside and gentiopicroside suppress Pck1 expression and induce phosphorylation of components in the insulin signalling cascade, demonstrates that sweroside and gentiopicroside show insulin-mimicking effects on the regulation of Pck1 expression. [4]

[Solvent]

Pyridine, DMSO, Methanol, Ethanol, Hot water, etc.

[HPLC Method] [5]

Mobile phase: 0. 1% Phosphoric acid H2O-Acetonitrile, gradient elution;

Flow rate: 1.0 ml/min;

Column temperature: 35 ℃;

The wave length of determination: 250 nm.

[Storage]

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

[References]

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

[2] Sun H, Li L, Zhang A, *et al. Fitoterapia, 2013, 84(1):174-9.*

[3] Yong T J, Sang C J, Hwang J S, *et al. Chem.-Biol.Interact., 2015, 238:33-9.*

[4] Huang XJ, Li J, .Mei Z Y, *et al. Biochem.Cell Biol., 2016, 94(3): 270-8.*

[5] Ji X Y, Wang C, Liu B. *Chinese J. Exp. Trad. Med. Formulae, 2014, 20(17):102-5.*

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