

Sophoricoside Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Sophoricoside

Catalog No.: CFN90148

Cas No.: 152-95-4

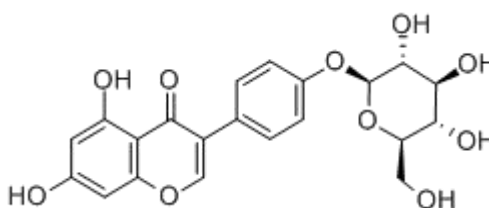
Purity: >=99%

M.F: C₂₁H₂₀O₁₀

M.W: 432.38

Physical Description: Powder

Synonyms: 5,7-Dihydroxy-3-[4-[(2S,3R,4S,5S,6R)-3,4,5-trihydroxy-6-(hydroxymethyl)oxan-2-yl]oxyphenyl]chromen-4-one.



[Intended Use]

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

[Source]

The fruits of *Sophora japonica* L.

[Biological Activity or Inhibitors]

Sophoricoside (SOP), an isoflavone glycoside was isolated from immature fruits of *Sophora japonica* (Leguminosae family), it has anti-inflammatory action, it inhibits the interleukin (IL)-6 bioactivity with an IC₅₀ value of 6.1 microM whereas it has no effects on IL-1 β and TNF- α bioactivities; it is a selective inhibitor of cyclooxygenase (COX)-2 activity with an IC₅₀ value of 4.4 microM, but does not show inhibitory effect on the synthesis of COX-2.^[1]

Sophoricoside has been widely reported as an immunomodulator, sophoricoside at concentrations of 1-10 μ M inhibited lipid accumulation in HepG2 cells in a dose-dependent manner, the lipid-lowering effect is mediated via the phosphorylation of AMPK; it has the capability to increase glucose uptake by C2C12 myotubes, also effectively inhibits the activities of α -glucosidase and α -amylase in vitro and remarkably lowered postprandial hyperglycaemia in starch-loaded C57BL6/J mice; suggests that sophoricoside is an effective regulator of lipogenesis and glucose consumption and may find utility in the treatment of obesity and type 2 diabetes.^[2]

Sophoricoside has ameliorative effect on mast cell-mediated allergic inflammation in vivo and in vitro, the findings provide us with novel insights into the pharmacological actions of sophoricoside as a potential molecule for use in the treatment of allergic inflammation diseases.^[3]

Sophoricoside exposure can reduce the number of implanted embryos in a dose-dependent manner and fails the embryo implantation through altering the morphology of uterine and compromising the endometrial receptivity.^[4]

Sophoricoside can be efficient in preventing ovariectomy-induced bone loss in rats.^[5]

[Solvent]

Pyridine, Methanol, Ethanol, etc.

[HPLC Method]^[6]

Mobile phase: Methanol- Acetonitrile-0.08 %Phosphoric acid H₂O=29:8:63 ;

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] Kim B H, Chung E Y, Ryu J C, *et al. Arch. Pharm. Res.*, 2003, 26(4):306-11.
- [2] Wu C, Luan H, Wang S, *et al. Molecules*, 2013, 18(12):15624-35.
- [3] Kim S J, Lee G Y, Jung J W, *et al. Molecules*, 2013, 18(5):6113-27.
- [4] Zhou J, Qu C, Qi S, *et al. Chem.Biol. Interact.*, 2014, 219:57-63.
- [5] Ning D U, Xu Y , Chen W Z, *et al. Journal of Chinese Integrative Medicine*, 2003, 1(1): 44-6.
- [6] Luo R, Li Z, Qian G, *et al. Yakugaku Zasshi.*, 2009, 129(12):1545-9.

[Contact]

Address:

S5-3 Building, No. 111, Dongfeng Rd.,
Wuhan Economic and Technological Development Zone,
Wuhan, Hubei 430056,
China

Email: info@chemfaces.com

Tel: +86-27-84237783

Fax: +86-27-84254680

Web: www.chemfaces.com

Tech Support: service@chemfaces.com