

Scoparone Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Scoparone

Catalog No.: CFN99314

Cas No.: 120-08-1

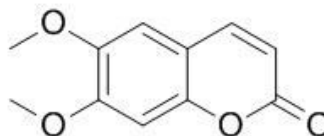
Purity: >=98%

M.F: C₁₁H₁₀O₄

M.W: 206.2

Physical Description: Powder

Synonyms: 6,7-Dimethoxy-2H-chromen-2-one; 6,7-Dimethylesculetin.



[Intended Use]

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

[Source]

The herbs of *Artemisia scoparia*.

[Biological Activity or Inhibitors]

Scoparone and emodin, the active principles isolated from *Artemisia scoparia* and *Polygonum multiflorum*, respectively, both exhibit immunosuppressive and vasorelaxant effects; emodin (10^{-6} – 3×10^{-5} M) and scoparone (10^{-6} – 3×10^{-5} M) can dose dependently relax rat thoracic aortic rings precontracted with phenylephrine, emodin (3×10^{-7} – 10^{-4} M) and scoparone (10^{-6} – 3×10^{-4} M) also can dose dependently suppress the responses of human mononuclear cells to phytohemagglutinin and mix lymphocyte reaction; they may be useful as new templates for the development of better immunosuppressive agents with vasorelaxant actions for use against transplantation rejection and autoimmune disease.^[1]

Scoparone can attenuate IgE-mediated allergic response in mast cells, it also can reduce the expression and secretion of pro-inflammatory cytokines, such as tumor necrosis factor-alpha and interleukin-6 in rat peritoneal mast cells (RPMC), suggests that scoparone may serve as an effective therapeutic agent for allergic diseases.^[2]

Scoparone has antianginal action, it can cause the increase in coronary flow and heart rate, but do not affect cardiac output, left ventricular pressure or left ventricular work in the isolated perfused heart, it has a marked inhibitory effect on the ST wave depression. ^[3]

Scoparone is a phytoalexin associated with resistance of citrus to *Phytophthora citrophthora*.^[4]

Scoparone has hepatoprotective effects, displays bright prospects in the prevention and therapy of liver injury.^[5]

Scoparone protects against some alterations of plasma lipoproteins, vascular morphology and vascular reactivity in the hyperlipidaemic diabetic rabbit, the protective effects of scoparone may be partly related to its free radical scavenging property.^[6]

Scoparone has antioxidant capabilities, it can inhibit ultraviolet radiation-induced lipid peroxidation, suggests that scoparone is a very efficient inhibitor of ultraviolet radiation-induced lipid peroxidation and damage.^[7]

[Solvent]

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

[HPLC Method]^[8]

Mobile phase: Acetonitrile-H₂O=20:80 ;

Flow rate: 0.8 ml/min;

Column temperature: 30 °C;

The wave length of determination: 343 nm.

[Storage]

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

[References]

- [1] Huang H C, Chu S H, Chao P D. *Eur. J. Pharmacol.*, 1991, 198(2-3):211-3.
- [2] Choi Y H, Yan G H. *Phytomed. Int. J. Phytother. Phytopharm.*, 2009, 16(12):1089-94.
- [3] Yamahara J, Kobayashi G, Matsuda H, et al. *Chem. Pharm.Bull.*, 1989, 37(5):1297-9.
- [4] Afek U, Szejnberg A. *Phytopathology*, 1989, 78(12):1678-82.
- [5] Zhang A, Sun H, Dou S, et al. *Analyst*, 2013, 138(1):353-61.
- [6] Huang H C, Weng Y I, Lee C R, et al. *Brit. J.Pharmacol.*, 1993, 110(4):1508-14.
- [7] Sourivong P, Schronerová K, Babincová M. *Zeitschrift für Naturforschung C*, 2013, 62(1-2):61-4.
- [8] Liu Y Y, Yu H, Yuan F, et al. *China Journal of Chinese Materia Medica*, 2013, 38(21):3691-5.

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