

Diosmetin Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Diosmetin

Catalog No.: CFN90210

Cas No.: 520-34-3

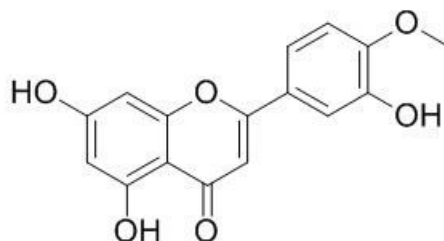
Purity: > 98%

M.F: C₁₆H₁₂O₆

M.W: 300.26

Physical Description: Yellow cryst.

Synonyms: 5,7-Trihydroxy-4'-methoxyflavone, 4'-Methyluteolin;Luteolin 4'-Methyl Ether.



[Intended Use]

1. Reference standards;
2. Pharmacological research;
3. Food research;
4. Cosmetic research;
5. Synthetic precursor compounds;
6. Intermediates & Fine Chemicals;
7. Ingredient in supplements, beverages;
8. Dairy products;
9. Others.

[Source]

The young fruit of *Citrus aurantium* L.

[Biological Activity or Inhibitors]

Diosmetin has cytoprotective activity, could be ascribed to their widely known antiradical property but also to their iron-chelating effectiveness.^[1]

Diosmetin and diosmin are natural dietary agonists of the AhR, causing a potent increase in CYP1A1 transcription and CYP1A1 activity; however, only diosmetin is capable of inhibiting CYP1A1 enzyme activity, thus inhibiting carcinogen activation.^[2]

Diosmetin induces osteoblastic differentiation through the PKC δ -Rac1-MEK3/6-p38 and PKC δ -Rac1-MEK1/2- ERK1/2-Runx2 pathways and that it is a promising agent for treating osteoporosis.^[3]

Diosmetin and luteolin exert synergistic cytostatic effects in human hepatoma HepG2 cells via CYP1A-catalyzed metabolism, activation of JNK and ERK and P53/P21 up-regulation.^[4]

Diosmetin and diosmetin act as antagonists of plasmamembrane amine transporters at the molecular level and suggest that inhibition of amine reuptake at the level of peripheral sympathetic nerve terminals could be responsible for the increased vascular tone observed in vivo after treatment with these drugs.^[5]

Administration of diosmetin demonstrates a beneficial effect on the course of cerulein-induced acute pancreatitis (AP) in mice, therefore, diosmetin may become a new therapeutic agent in future clinical trials for treatment of AP.^[6]

[Solvent]

Chloroform, Dichloromethane, DMSO, Acetone.

[HPLC Method]^[7]

Mobile phase: Methanol-Water-Acetic acid=55:43:2 ;

Flow rate: 1.0 ml/min;

Column temperature: 43 °C;

The wave length of determination: 344 nm.

[Storage]

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

[References]

- [1] Morel I, Lescoat G, Cogrel P, *et al. Biochem. Pharmacol.*, 1993, 45(1):13-9.
- [2] Ciolino H, Wang T, Yeh G. *Cancer Res.*, 1998, 58(13):2754-60.
- [3] Hsu Y L, Kuo P L. *J Bone Miner Res.* , 2008, 23(6):949–60.
- [4] Androutsopoulos V P, Spandidos D A. *J. Nutr. Biochem.*, 2012, 24(2):496-504.
- [5] Sher E, Codignola A, Biancardi E, *et al. Pharmacol. Res.*, 1992, 26(4):395-402.
- [6] Yu G, Wan R, Yin G, *et al. Int. J. Clin. Exp. Patho.*, 2014, 7(5):2133-42.
- [7] Kanaze F I, Bounartzi M I, Niopas I. *Biomed. Chromatogr.*, 2004, 18(10):800-4.

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