

Moracin C Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Moracin C

Catalog No.: CFN97178

Cas No.: 69120-06-5

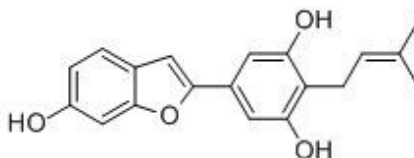
Purity: > 95%

M.F: C₁₉H₁₈O₄

M.W: 310.4

Physical Description: Powder

Synonyms: 5-(6-Hydroxybenzofuran-2-yl)-2-(3-methyl-2-butenyl)-1,3-benzenediol.



[Intended Use]

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

[Source]

The root bark of *Morus alba* L.

[Biological Activity or Inhibitors]

Moracin C and chalcomoracin, potent antibacterial compounds from *Morus alba*, can

inhibit FabI and fatty acid synthesis, moracin C and chalcomoracin inhibit *S. aureus* FabI with IC(50) of 83.8 and 5.5 μ M, respectively.^[1]

Moracin C has anti-inflammatory effect, it can effectively reduce lipopolysaccharide (LPS) stimulated up-regulation of mRNA and protein expression of inducible nitric oxide synthase (iNOS), cyclooxygenase-2 (COX-2), and several pro-inflammatory cytokines (interleukin-1 β (IL-1 β), interleukin-6 (IL-6) and tumor necrosis factor α (TNF- α); the anti-inflammatory effect of moracin C is associated with the activation of the mitogen activated protein kinases (MAPKs) (including p38, ERK and JNK) and nuclear factor- κ B (NF- κ B) pathways, especially reducing the nuclear translocation of NF- κ B p65 subunit as revealed by nuclear separation experiment and confocal microscopy.^[2]

Moracin treatment can inhibit the double 12-O-tetradecanoylphorbol 13-acetate (TPA) treatment-induced morphological changes reflecting inflammatory response, including leucocyte infiltration, hyperplasia and cell proliferation; moracin treatment furthermore can significantly suppress the elevation in 4-HNE level and elevate expression of c-fos, c-myc and cyclooxygenase-2 (COX-2) in normal epidermis induced by double application of TPA; the moracin may be protective influence in tumor promotion, utilization of Moracin may open a new avenue in the treatment of tumorigenesis. ^[3]

Moracin C and D, new phytoalexins from diseased mulberry, are antifungal compounds.^[4]

[Solvent]

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

[HPLC Method]^[5]

Mobile phase: Acetonitrile- 0.05% Phosphoric acid H₂O, gradient elution;

Flow rate: 0.8 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 310 nm.

[Storage]

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

[References]

- [1] Kim Y J, Sohn M J, Kim W G. *Biol. Pharm. Bull.*, 2011, 35(5):791-5.
- [2] Xue Y, Dang W, Dong N, *et al.* *Int. J. Global Warming*, 2016, 17(8):187-214.
- [3] Khyade V B, Lonkar U D. *Annals of Plant Sciences*, 2013, 2(10):412-9.
- [4] Takasugi M, Nagao S, Ueno S, *et al.* *Chem. Lett.*, 1978(11):1239-40.
- [5] Won C S, Jeong J Y, Jin L Y, *et al.* *Prev. Nutr. Food Sci.*, 2013, 18(4):256-62.

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