

Butein Datasheet

5th Edition (Revised in January, 2017)

[Product Information]

Name: Butein

Catalog No.: CFN98776

Cas No.: 487-52-5

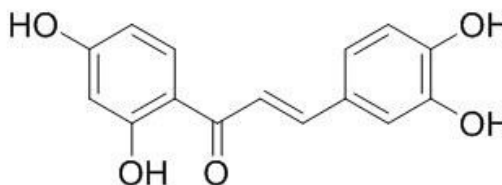
Purity: > 95%

M.F: C₁₅H₁₂O₅

M.W: 272.3

Physical Description: Yellow powder

Synonyms: 2',3,4,4'-tetrahydroxychalcone; (2E)-1-(2,4-dihydroxyphenyl)-3-(3,4-dihydroxyphenyl)prop-2-en-1-one.



[Intended Use]

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

[Source]

The herbs of *Broussonetia kazinoki*.

[Biological Activity or Inhibitors]

Butein is an aromatase inhibitor and a potential natural alternative for the chemoprevention or therapy of breast cancer.^[1]

Butein is a chelator of ferrous and copper ions, it serves as a powerful antioxidant against lipid and LDL peroxidation by its versatile free radical scavenging actions and metal ion chelation.^[2]

Butein and phloretin up-regulate HO-1 and GCL expression through the ERK2/Nrf2 pathway and protect hepatocytes against oxidative stress. ^[3]

Butein is a novel blocker of STAT3 activation and thus may have potential in suppression of tumor cell proliferation and reversal of chemoresistance in MM cells.^[4]

Butein has anti-inflammatory effect , it inhibits iNOS gene expression, providing possible mechanisms for its anti-inflammatory action.^[5]

Butein ameliorates renal concentrating ability via up-regulation of renal AQP 2 water channel in rats with cisplatin-induced ARF without ameliorating effect on renal filtration defect.^[6]

Butein has a hypotensive effect, at least in part, via the inhibition of angiotensin converting enzyme.^[7]

[Solvent]

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

[HPLC Method]^[8]

Mobile phase: 0.5% Formic acid in methanol- H₂O=50:50 ;

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] Wang Y, Chan F L, Chen S, *et al. Life Sci.*, 2005, 77(1):39-51.
- [2] Cheng Z J, Kuo S C, Chan S C, *et al. B.B.A.*, 1998, 1392(2–3):291-9.
- [3] Yang Y C, Lii C K, Lin A H, *et al. Free Radical Bio. Med.*, 2011, 51(11):2073-81.
- [4] Pandey M K, Sung B, Ahn K S, *et al. Mol. Pharmacol.*, 2009, 75(3):525-33.
- [5] Lee S H, Seo G S, Dong H S. *Biochem. Biophys. Res. Commun.*, 2004, 323(1):125-32.
- [6] Kang D G, Lee A S, Mun Y J, *et al. Biol. Pharm. Bull.*, 2004, 27(3):366-70.
- [7] Kang D G, Kim Y C, Sohn E J, *et al. Biol. Pharm. Bull.*, 2003, 26(9):1345-7.
- [8] Júnior G, Sousa C D, Cavaleiro A, *et al. Helv. Chim. Acta*, 2008, 91(11):2159-67.

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