Natural Products

ChemFaces

Morin Datasheet

5th Edition (Revised in January, 2017)

[Product Information]

Name: Morin

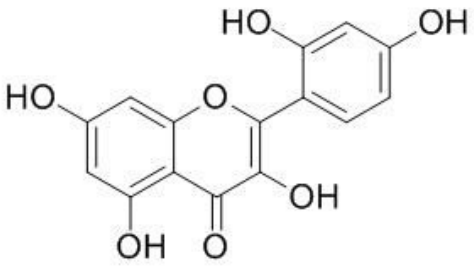
Catalog No.: CFN99929

Cas No.: 480-16-0

Purity: >=98%

M.F: $C_{15}H_{10}O_7$

M.W: 302.24



Physical Description: Yellow cryst.

Synonyms:2,3,4,5,7-Pentahydroxyflavone;2-(3,5-Dihydroxyphenyl)-3,6,8-trihydroxy-4H-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 root bark of *Morus alba L.*

[Biological Activity or Inhibitors]

Morin protects against oxidative stress-induced DNA damage in pancreatic β-cells by activating the Nrf2 signaling pathway.[1]

Morin exerts the anti-inflammatory and anti-oxidative effects against LPS/D-GalN-induced acute liver injury by activating Nrf2 signal pathways and inhibiting NF-κB activation.[2]

Morin augments the cellular antioxidant defense capacity through the activation of Nrf2/HO-1 signaling, which involves the activation of the ERK pathway, thereby protecting C2C12 myoblasts from H2O2-induced oxidative cytotoxicity. [3]

Morin exerts significant inhibition activity on α-glucosidase in a reversible mixed-type manner with an IC_{50} value of (4.48 ± 0.04) uM, it also exhibits inhibition in the generation of advanced glycation end products which was related to the long term complications of diabetes.[4]

Morin can be used to prevent bladder cancer, it can reduce cyclin D1, cyclin E, CDK2 and CDK4 expression via the induction of p21WAF1 expression, increase ERK1/2 phosphorylation and decrease JNK, and AKT phosphorylation, and prevent MMP-9 expression via the inhibition of transcription factors AP-1, Sp-1, and NF-κB, thereby resulting in the inhibition of growth, migration, and invasion of bladder cancer EJ cells.[5]

[Solvent]

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

[HPLC Method][6]

Mobile phase: 0.5% Acetic acid in water- Acetonitrile=80:20 ;

Flow rate: 1.0 ml/min;

Column temperature: 30 ℃;

The wave length of determination: 355 nm.

[Storage]

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

[References]

[1] Vanitha P, Kumar SS, Dornadula S, *et al. Eur. J. Pharmacol., 2017, pii: S0014-2999(17)30092-4.*

[2] Tian Y, Li Z, Shen B, *et al. Int.Immunopharmacol.,2017,;45:148-55.*

[3] Lee MH, Han MH, Lee DS, *et al. Int. J. Mol. Med.., 2017,39(2):399-406.*

[4] Zeng L, Zhang G, Liao Y, *et al. Food Funct., 2016,7(9):3953-63.*

[5] Shin SS, Won SY, Noh DH, *et al. Drug. Dev. Res.,2017 Feb 8. doi: 10.1002.*

[6] Kongkiatpaiboon S, Tungsukruthai P, Sriyakool K, *et al. J. Chromatogr. Sci., 2016, Dec 14.*

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