Natural Products

ChemFaces

Isorhamnetin Datasheet

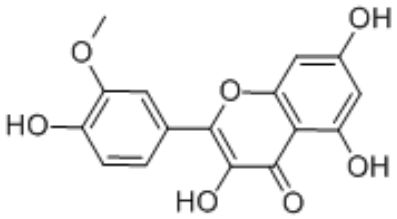
4th Edition (Revised in July, 2016)

[Product Information]

Name: Isorhamnetin

Catalog No.: CFN98735

Cas No.: 480-19-3



Purity: >=98%

M.F: $C_{16}H_{12}O_7$

M.W: 316.26

Physical Description: Yellow powder

Synonyms: 3,5,7-Trihydroxy-2-(4-hydroxy-3-metoxyphenyl)benzopyran-4-on; 3,5,7-Trihydroxy-2-(4-hydroxy-3-methoxyphenyl)-4H-1-benzopyran-4-one;3-Methylquercetin.

[Intended Use]

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

[Source]

The herbs of *Typha orientalis Presl.*

[Biological Activity or Inhibitors]

Isorhamnetin, isolated from Hippophae rhamnoides L., has anti-tumor activity, has cytotoxic effect on BEL-7402 cells with IC_{50} equal to 74.4±1.13 ug ml^{-1} after treatment with isorhamnetin for 72 h.[1]

Isorhamnetin and quercetin prevent angiotensin II (AngII)-induced endothelial dysfunction by inhibiting the overexpression of p47(phox) and the subsequent increases O^{2-}production, resulting in increased nitric oxide bioavailability.[2]

Isorhamnetin, kaempferol, and quercetin preferentially inhibit the in vitro catalytic activity of human CYP1B1. [3]

Isorhamnetin has anti-adipogenic effects in mouse 3T3-L1 cells, it inhibits the adipogenic differentiation of hAMSCs and that its mechanisms are mediated by the stabilization of β-catenin.[4]

Isorhamnetin prevent endothelial cell injuries from oxidized LDL via activation of p38MAPK.[5]

Isorhamnetin inhibits the H(2)O(2)-induced activation of the intrinsic apoptotic pathway via ROS scavenging and ERK inactivation, thus, it is a promising reagent for the treatment of ROS-induced cardiomyopathy.[6]

Isorhamnetin appears to be a potent drug against esophageal cancer due to its in vitro potential to not only inhibit proliferation but also induce apoptosis of Eca-109 cells.[7]

[Solvent]

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

[HPLC Method][8]

Mobile phase: Methanol- Acetonitrile- 1.0% Acetic acid H2O=40:15:45;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 368 nm.

[Storage]

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

[References]

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[2] Sanchez M, Lodi F, Vera R, *et al. J. Nutr., 2007, 137(4):910-5.*

[3] Chang T K H, Chen J, Yeung E Y H. *Toxicol. Appl. Pharmacol., 2006, 213(1):18-26*.

[4] Jongsung Lee, Jienny Lee, Eunsun Jung,*et al. Life Sci., 2010, 86(11-12):416-23.*

[5] Bao M, Lou Y. *Eur. J. Pharmacol., 2006, 547(1-3):22-30.*

[6] .Sun B, Sun G, Xiao J, *et al. J.Cell. Biochem., 2012, 113(2):473-85.*

[7] Gang M, Yang C, Yi Q, *et al. Chem. Biol. Int., 2007, 167(2):153-60.*

[8] Zu Y, Li C, Fu Y, *et al. J. Pharm. Biomed. Anal., 2006, 41(3):714-9.*

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