Natural Products

ChemFaces

Kaempferitrin Datasheet

5th Edition (Revised in January, 2017)

[Product Information]

Name: Kaempferitrin

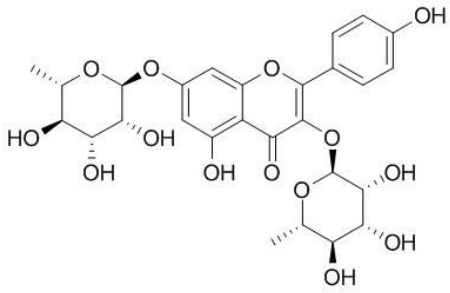
Catalog No.: CFN98756

Cas No.: 482-38-2

Purity: >=98%

M.F: $C_{27}H_{30}O_{14}$

M.W: 578.5



Physical Description: Yellow powder

Synonyms: Kaempferol-3-O-α-L-rhamnopyranosyl-7-O-α-L-rhamnopyranoside;5-Hydroxy-2-(4-hydroxyphenyl)-3,7-bis[[(2S,3R,4R,5R,6S)-3,4,5-trihydroxy-6-methyloxan-2-yl]oxy]chromen-4-one;Kaempferol 3,7-L-dirhamnoside.

[Intended Use]

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

[Source]

The root of *Kaempferia galangal L.*

[Biological Activity or Inhibitors]

Kaempferitrin has an acute lowering effect on blood glucose in diabetic rats and to stimulate the glucose uptake percentile, as efficiently as insulin in muscle from normal rats.[1]

Kaempferitrin improves insulin resistance by the activation of the classical insulin transduction pathway, and increases adiponectin secretion.[2]

Kaempferitrin exerts cytotoxic and antitumor effects against HeLa cells, the general mechanisms include cell cycle arrest in G1 phase and apoptosis via intrinsic pathway in a caspase dependent pathway. [3]

Kaempferitrin exerts immunostimulatory effects on immune responses mediated by splenocytes, macrophages, peripheral blood mononuclear cells (PBMC) and NK cells.[4]

Kaempfertrin possesses significant antiosteoporotic activity, it can significantly improve the bone mass and microarchitecture in ovariectomized (OVX) rats, also exhibits stimulatory effect on osteoblastic cells and inhibitory action on osteoclastic cells, which down-regulates the phosphorylation level of I-κB.[5]

Kaempferitrin has antidepressant-like effect, the effect is related to the serotonergic system, principally 5-HT1A.[6]

[Solvent]

Pyridine, Methanol, Ethanol, etc.

[HPLC Method][7]

Mobile phase: 0.1% Trifluoroacetic acid in water- 0.1% Trifluoroacetic acid in acetonitrile, gradient elution ;

Flow rate: 1.0 ml/min;

Column temperature: 25 ℃;

The wave length of determination: 210 nm.

[Storage]

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

[References]

[1] Jorge A P, Horst H, Sousa E D, *et al. Chem. Biol. Interact., 2004, 149(2-3):89-96.*

[2] Tzeng Y M, Chen K, Rao Y K, *et al. Eur. J. Pharmacol.,2009, 607(1–3):27-34.*

[3] Alonso-Castro A J, Ortiz-Sánchez E, García-Regalado A, *et al. J Ethnopharmacol., 2013, 145(2):476-89.*

[4] Del C J M, Josabad A A, Garcíacarrancá A. *J. Ethnopharmacol.,2013, 148(1):337-40.*

[5] Ma X Q, Han T, Zhang X, *et al. Phytomedicine. 2015,22(13):1159-62.*

[6] Cassani Julia, Dorantes-Barrón, Ana María, *et al. Molecules, 2014,19: 21442-61.*

[7] Lincha V R, Zhao B T, Woo M H, *et al. Biol. Pharm. Bull., 2016, 39(6):984-92.*

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