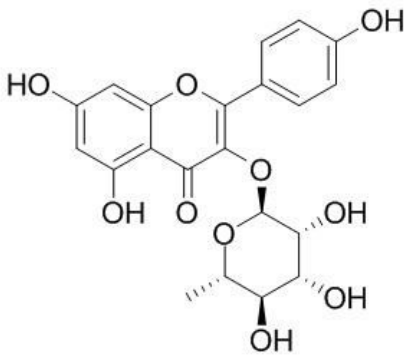
Natural Products

ChemFaces

Afzelin Datasheet

4th Edition (Revised in July, 2016)

[Product Information]



Name: Afzelin

Catalog No.: CFN98757

Cas No.: 482-39-3

Purity: > 98%

M.F: $C_{21}H_{20}O_{10}$

M.W: 432.4

Physical Description: Yellow powder

Synonyms:

Kaempferol 3-o-glucorhamnoside; Kaempferol 3-rhamnoside; Afzeloside; Kaempferin.

[Intended Use]

1. Reference standards;
2. Pharmacological research;
3. Food and cosmetic research;
4. Synthetic precursor compounds;
5. Intermediates & Fine Chemicals;
6. Ingredient in supplements, beverages;
7. Others.

[Source]

The herbs of *Thesium chinense Turcz.*

[Biological Activity or Inhibitors]

Afzelin, isolated from Cornus macrophylla, has antibacterial effects on Pseudomonas aeruginosa, its minimum inhibitory concentration (MIC) is 31 ug/mL.[1]

Afzelin has several cellular activities such as DNA-protective, antioxidant, and anti-inflammatory as well as UV-absorbing activity and may protect human skin from UVB-induced damage by a combination of UV-absorbing and cellular activities.[2]

Afzelin has potenial anti-cancer activity against prostate cancer, the activity is due to inhibition of LIM domain kinase 021 expression, it can inhibit the proliferation of LNCaP and PC302cells, and block the cell cycle in the G002phase.[3]

Afzelin can attenuate asthma phenotypes is based on reduction of Th2 cytokine via inhibition of GATA-binding protein 3 transcription factor, which is the master regulator of Th2 cytokine differentiation and production.[4]

Afzelin promotes melanogenesis by occurs through increased MITF gene expression, which is mediated by activation of p38 MAPK, and suggest that afzelin may be useful as a protective agent against ultraviolet irradiation. [5]

[Solvent]

Pyridine, Methanol, Ethanol, Hot water, etc.

[HPLC Method][6]

Mobile phase: Methanol-0.1% Acetic acid H2O = 52:48;

Flow rate: 1.0 ml/min;

Column temperature: 35 ℃;

The wave length of determination: 264 nm.

[Storage]

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

[References]

[1] Lee S Y, So Y J, Shin M S, *et al. Molecules, 2014, 19(3):3173-80.*

[2] Shin S W, Jung E, Kim S, *et al. Plos One, 2013, 8(4):e61971-e61971.*

[3] Zhu K C, Sun J M, Shen J G, *et al. Oncol. Lett., 2015, 10(4):2359-65.*

[4] Zhou W, Nie X. *Mol .Med. Rep., 2015, 12(1):71-6.*

[5] Jung E, Jin H K, Mi O K, *et al. Chem.-Biol. Interact., 2016, 254:167-72.*

[6] Huo L, Chen X H, Cao Y, *et al. Chinese J. Pharm. Anal., 2010(05):831-3.*

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