

Arctiin Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Arctiin

Catalog No.: CFN99991

Cas No.: 20362-31-6

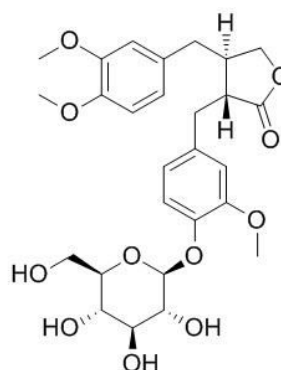
Purity: > 98%

M.F: C₂₇H₃₄O₁₁

M.W: 534.55

Physical Description: Powder

Synonyms: (3R,4R)-4-[(3,4-dimethoxyphenyl)methyl]-3-[[3-methoxy-4-[[[(2S,3R,4S,5S,6R)-3,4,5-trihydroxy-6-(hydroxymethyl)-2-oxanyl]oxy]phenyl]methyl]-2-oxolanone.



[Intended Use]

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

[Source]

The fruits of *Arctium lappa* L.

[Biological Activity or Inhibitors]

Arctiin, a lignan isolated from *Arctium lappa* (burdock) seeds, has a protective effect on 2-amino-1-methyl-6-phenylimidazo[4,5-b]pyridine (PhIP)-induced carcinogenesis particularly in the mammary gland in the promotion period, it may have a weak co-carcinogenic influence on MeIQx-induced hepatocarcinogenesis. ^[1]

Arctiin has been reported to have anti-inflammatory, anti-oxidant, antibacterial, and antiviral effects in vitro, it may exert anti-inflammatory effect by inhibiting the pro-inflammatory mediators through the inactivation of NF- κ B. ^[2]

Arctiin significantly induces cell detachment and decreases the cell numbers via the up-regulation of MUC-1 mRNA and protein in PC-3 cells. ^[3]

Arctiin down-regulates cyclin D1 protein expression and that this at least partially contributes to the anti-proliferative effect of arctiin. ^[4]

Arctiin has ameliorative effects on glomerulonephritis is carried out mainly by suppression of NF- κ B activation and nuclear translocation and the decreases in the levels of these pro-inflammatory cytokines, while SOD is involved in the inhibitory pathway of NF- κ B activation; arctiin has favorable potency for the development of an inhibitory agent of NF- κ B and further application to clinical treatment of glomerulonephritis, though clinical studies are required. ^[5]

Arctiin induces an UVB protective effect in human dermal fibroblast cells through microRNA expression changes. ^[6]

Arctigenin and arctiin have antiproliferative effect. ^[7]

[Solvent]

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

[HPLC Method] ^[8]

Mobile phase: Acetonitrile-H₂O=25:75;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 278 nm.

[Storage]

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

[References]

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- [3] Huang D M, Guh J H, Chueh S C, *et al. Prostate*, 2004, 59(3):260-7.
- [4] Matsuzaki Y, Koyama M, Hitomi T, *et al. Oncol. Rep.*, 2008, 19(3):721-7.
- [5] Wu J G, Wu J Z, Sun L N, *et al. Phytomed. Int. J. Phytother. Phytopharmacol.*, 2009, 16(11):1033-41.
- [6] Lee G T, Cha H J, Lee K S, *et al. Int. J. Mol. Med.*, 2014, 33(3):640-8.
- [7] Shi Y R, Ahn J W, Kang Y H, *et al. Arch. Pharm. Res.*, 1995, 18(6):462-3.
- [8] Zheng L, Song Y. *Pharm. Clin. Chinese Mat. Med.*, 2011, 02(2):23-6.

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