

Linarin Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Linarin; Buddleoside

Catalog No.: CFN98738

Cas No.: 480-36-4

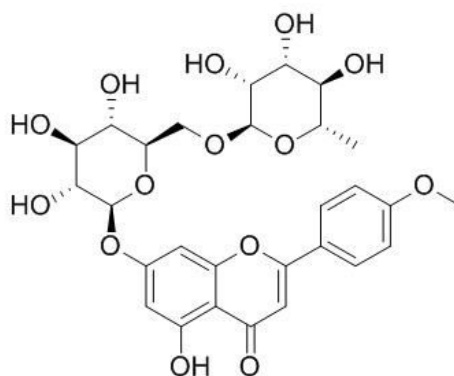
Purity: > 98%

M.F: C₂₈H₃₂O₁₄

M.W: 592.6

Physical Description: Yellow powder

Synonyms: 5-Hydroxy-2-(4-methoxyphenyl)-7-[[[(2S,3R,4S,5S,6R)-3,4,5-trihydroxy-6-[[[(2R,3R,4R,5R,6S)-3,4,5-trihydroxy-6-methyl-2-oxanyl]oxymethyl]-2-oxanyl]oxy]-1-benzopyran-4-one.



[Intended Use]

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

[Source]

The herb of *Uncaria sinensis* (Oliv.) Havil.

[Biological Activity or Inhibitors]

Linarin is a flavone glycoside in the plants *Flos chrysanthemi indic*i, *Buddleja officinalis*, *Cirsium setosum*, *Mentha arvensis* and *Buddleja davidii*, possesses analgesic, antipyretic, anti-inflammatory and neuroprotective activities. ^[1]

Linarin is known to have anti-acetylcholinesterase effects, prevents A β (25-35)-induced neurotoxicity through the activation of PI3K/Akt, which subsequently inhibits GSK-3 β and up-regulates Bcl-2, may be a potent therapeutic compound against Alzheimer's disease acting through both acetylcholinesterase inhibition and neuroprotection. ^[2]

Linarin has dose-dependent analgesic and anti-inflammatory activities. ^[3]

Linarin can protect osteoblasts against hydrogen peroxide-induced osteoblastic dysfunction and may exert anti-resorptive actions, at least in part, via the reduction of RANKL and oxidative damage. ^[4]

Linarin induces the osteogenic differentiation and mineralization of MC3T3-E1 osteoblastic cells by activating the BMP-2/RUNX2 pathway through PKA signaling in vitro and protected against OVX-induced bone loss in vivo, suggests that linarin is a useful natural alternative for the management of postmenopausal osteoporosis. ^[5]

[Solvent]

Pyridine, DMSO, Methanol, Ethanol, Hot water, etc.

[HPLC Method] ^[6]

Mobile phase: Methanol- H₂O- Glacial acetic acid =26:23:1;

Flow rate: 1.0 ml/min;

Column temperature: 25 °C;

The wave length of determination: 334 nm.

[Storage]

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

[References]

- [1] Lou H, Fan P, Perez R G, *et al. Bioorgan. Med. Chem.*, 2011, 19(13):4021-7.
- [2] Martínez-Vázquez M, Ramírez Apan T O, Lastra A L, *et al. Planta Med.*, 1998, 64(2):134-7.
- [3] Kim Y H, Lee Y S, Choi E M. *Cell Immunol.*, 2011, 268(2):112-6.
- [4] Feng X, Wang X, Liu Y, *et al. Iran J. Pharm. Res.*, 2015, 14(3):949-54.
- [5] Li J, Hao L, Wu J, *et al. Int. J. Mol. Med.*, 2016, 37(4):901-10.
- [6] Guo Q, Fang H, Shen H. *China Journal of Chinese Materia Medica*, 2010, 35(9).

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