



Pseudoginsenoside F11 Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Pseudoginsenoside F11

Catalog No.: CFN99963

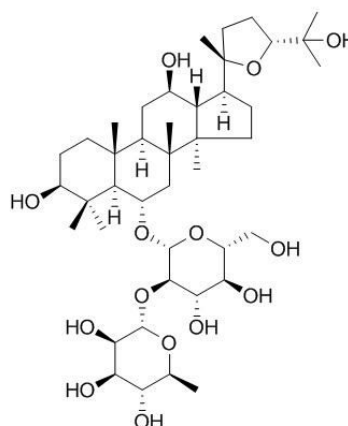
Cas No.: 69884-00-0

Purity: > 98%

M.F: C₄₂H₇₂O₁₄

M.W: 801.01

Physical Description: White powder



Synonyms: (2S,3R,4R,5R,6S)-2-[[[(2R,3R,4S,5S,6R)-2-[[[(6S,10R,12S,14R,17S)-3,12-dihydroxy-17-[(2S,5R)-5-(2-hydroxypropan-2-yl)-2-methyl-2-oxolanyl]-2,4,4,10,14-pentamethyl-1,2,3,5,6,7,8,9,11,12,13,15,16,17-tetradecahydrocyclopenta[a]phenanthren-6-yl]oxy]-4,5-dihydrox.

[Intended Use]

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

[Source]

The roots of *Panax ginseng* C. A. Mey.

[Biological Activity or Inhibitors]

Pseudoginsenoside-F11(PF11), an ocotillol-type ginsenoside, possesses significant neuroprotective activity, PF11 exerts anti-neuroinflammatory effects on LPS-activated microglial cells by inhibiting TLR4-mediated TAK1/IKK/NF- κ B, MAPKs and Akt signaling pathways, suggesting its therapeutic implication for neurodegenerative disease associated with neuroinflammation.^[1]

Pseudoginsenoside-F11 antagonizes the development of analgesia tolerance to morphine, it has antagonistic effect on the various actions of morphine, it can attenuate morphine-induced signalling in Chinese hamster ovary-mu cells.^[2,3]

Pseudoginsenoside-F11 may block the development of morphine-induced behavioral sensitization via its effect, at least partially, on the glutamatergic system in the mPFC.^[4]

Ocotillol, a derivate of pseudoginsenoside F11 can have cardioprotective effects on myocardial injury induced by ISO in rats, which may be, in part, by virtue of enhancing the antioxidative potency of the heart.^[5]

Pseudoginsenoside F11 is a novel partial PPAR γ agonist, can promote adiponectin oligomerization and secretion in 3T3-L1 adipocytes and inhibit obesity-linked phosphorylation of PPAR γ at Ser-273 by Cdk5. ^[6]

Pseudoginsenoside-F11 demonstrates to antagonize the learning and memory deficits induced by scopolamine, morphine and methamphetamine in mice; the inhibitory effect on amyloidogenesis and oxidative stress and some beneficial effects on neuronal functions might contribute to the recognition improvement effect of PF11 in APP/PS1 mice, indicates that PF11 may serve as a potential therapeutic agent for the treatment of AD.^[7]

Pseudoginsenoside-F11 has potent anti-inflammatory effect, mediated by dual suppression of COX-2 activity and LPS-induced inflammatory gene expression via NF- κ B inactivation.^[8]

[Solvent]

Pyridine, Methanol, Ethanol, Hot water, etc.

[HPLC Method]^[9]

HPLC-ELSD:

Mobile phase: Acetonitrile- H₂O, gradient elution ;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 203 nm.

Drift tube temperature: 106.5 °C

Flow rate of gas : 2.9L/min.

[Storage]

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

[References]

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- [2] Zhu Li, Chun F Wu, Gang Pei, *et al. Pharmacol. Biochem. Be.*, 2000, 66(3):595-601.
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- [4] Yue H, Jing Y Y, Wu C F, *et al. Pharmacol. Biochem. Be.*, 2007, 86(4):660-6.
- [5] Yu C, Fu F, Yu X, *et al. Arzneimittel-Forsch*, 2007, 57(9):568-72.
- [6] Wu G, Yi J, Liu L, *et al. Ppar Res.*, 2012, 2013(6):701017-701017.
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- [8] Wang X, Zhang L, Zhao S, *et al. Chinese Pharmacological Society tonics Pharmacology Professional Committee of the Symposium* ,2012.
- [9] Dong L, Zhang C Y, Chen S L. *Acta Pharm. Sin.*, 2011, 46(2):198-202.

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