

Ginsenoside Rf Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Ginsenoside Rf

Catalog No.: CFN99976

Cas No.: 52286-58-5

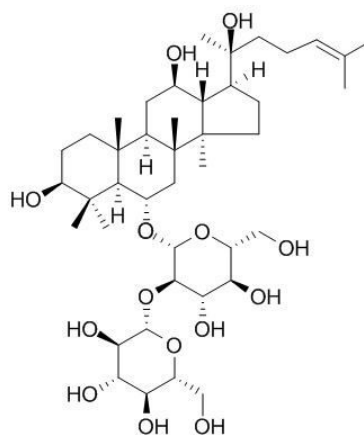
Purity: > 98%

M.F: C₄₂H₇₂O₁₄

M.W: 801.01

Physical Description: White powder

Synonyms: (2S,3R,4S,5S,6R)-2-[[[(2R,3R,4S,5S,6R)-2-[[[(3S,5R,6S,8R,9R,10R,12R,13R,14R,17S)-3,12-dihydroxy-17-[(2S)-2-hydroxy-6-methylhept-5-en-2-yl]-4,4,8,10,14-pentamethyl-2,3,5,6,7,9,11,12,13,15,16,17-dodecahydro-1H-cyclopenta[a]phenanthren-6-yl]oxy]-4,5-dihydroxy-



[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]

Ginsenoside Rf, as an effective natural product, induces G2/Mphase cell cycle arrest and apoptosis in human osteosarcoma MG-63 cells through the mitochondrial pathway, suggests that it may have a therapeutic effect on human osteosarcoma.^[1]

Ginsenoside Rf(Rf) , a trace component of ginseng root, produces antinociception in mice; Ginsenoside Rf potentiates U-50,488H-induced analgesia and inhibits tolerance to its analgesia in mice.^[2,3]

Ginsenoside Rf regulates voltage-dependent Ca(2+) channels through pertussis toxin (PTX)-sensitive G proteins in rat sensory neurons, suggests that Rf can act through a novel G protein-linked receptor in the nervous system. ^[4]

Ginsenoside Rf induces CYP3A4 and MDR1 gene expression through constitutive androstane receptor- and pregnane X receptor-mediated pathways. ^[5]

Ginsenoside Rf significantly reduces the production of IL-1 β , IL-6, TNF- α , NO, and ROS, which are most highly activated in inflammatory bowel disease (IBD), and suppresses TNF- α /LPS-induced NF- κ B transcriptional activity; suggests that ginsenoside Rf has potent intestinal anti-inflammatory effects that could be used to treat diseases such as IBD.^[6]

[Solvent]

Pyridine, Methanol, Ethanol, Hot water, etc.

[HPLC Method]^[7]

Mobile phase: Acetonitrile -H₂O, gradient elution ;

Flow rate: 1.0 ml/min;

Column temperature: 35 °C;

The wave length of determination: 203 nm.

[Storage]

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

[References]

- [1] Shangguan W J, Li H, Zhang Y H. *Oncol. Rep.*, 2014, 31(1):305-13.
- [2] Mogil J S, Shin Y H, Mccleskey E W, *et al. Brain Res.*, 1998, 792(2):218-28.
- [3] Nemmani K V S, Ramarao P. *Life Sci.*, 2003, 72(7):759-68.
- [4] Choi S, Jung S Y, Ko Y S, *et al. Mol. Pharmacol.*, 2002, 61(4):928-35.
- [5] Li Y, Wang Q, Yao X, *et al. Eur. J. Pharmacol.*, 2010, 640(1-3):46-54.
- [6] Ahn S, Siddiqi M H, Aceituno V C, *et al. Immun. Invest.*, 2016,45(5):439-49.
- [7] Zang P, Zhang P, Gao Y, *et al. J. Med. Plant Res.*, 2011, 5(23):5513-6.

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