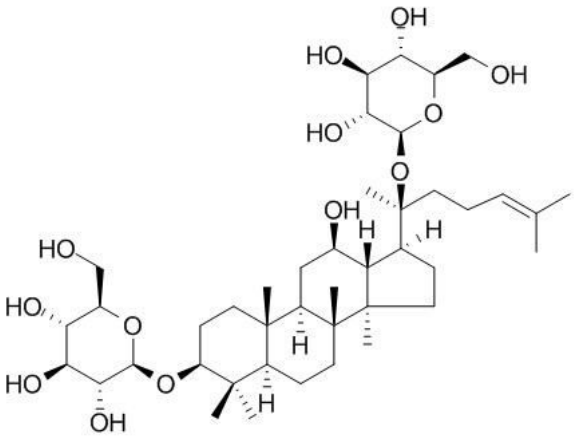
Natural Products

ChemFaces

Ginsenoside F2 Datasheet

4th Edition (Revised in July, 2016)

[Product Information]



Name: Ginsenoside F2

Catalog No.: CFN99755

Cas No.: 62025-49-4

Purity: > 98%

M.F: $C_{42}H_{72}O_{13}$

M.W: 785.01

Physical Description: White powder

Synonyms:(20S)-3β-(β-D-Glucopyranosyloxy)-20-(β-D-glucopyranosyloxy)dammar-24-ene-12β-ol;(20S)-3β,20-Bis(β-D-glucopyranosyloxy)-5α-dammar-24-ene-12β-ol;12β-Hydroxy-5α-dammar-24-ene-3β,20-diylbis(β-D-glucopyranoside);20(S)-Ginsenoside-F2;20(S)-Ginsenoside F2.

[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. Aromatics;
8. Others.

[Source]

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

[Biological Activity or Inhibitors]

Ginsenoside F2 has the anti-cancer activity, it induces apoptosis in breast cancer stem cells (CSCs) by activating the intrinsic apoptotic pathway and mitochondrial dysfunction, also induces the formation of acidic vesicular organelles, recruitment of GFP-LC3-II to autophagosomes, and elevation of Atg-7 levels, suggests that F2 initiates an autophagic progression in breast CSCs. [1]

Ginsenoside F2 suppresses hair cell apoptosis and premature entry to catagen more effectively than finasteride, it decreases the expression of TGF-β 2 and SCAP proteins, this study provides evidence those factors in the SCAP pathway could be targets for hair loss prevention drugs.[2]

Ginsenoside F2 could be a new potential chemotherapeutic drug for glioblastoma multiforme (GBM) treatment by inhibiting the growth and invasion of cancer, the anticancer activity might be mediated through inhibition of proliferation judged by Ki67 and apoptosis induced by activation of caspase-3 and -8.[3]

Ginsenoside F2 may reduce obesity via the inhibition of adipogenesis in the 3T3-L1 cell line.[4]

[Solvent]

Pyridine, DMSO, Ethanol, Methanol.

[HPLC Method][5]

Mobile phase: Acetonitrile -H2O, gradient elution ;

Flow rate: 1.0 ml/min;

Column temperature: 30 ℃;

The wave length of determination: 203 nm.

[Storage]

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

[References]

[1] Mai T T, Moon J Y, Song Y W, *et al. Cancer Lett., 2012, 321(2):144-53.*

[2] Shin H S, Park S Y, Hwang E S, *et al. Biol. Pharm. Bull., 2014, 37(5):755-63.*

[3] Shin J Y, Lee J M, Shin H S, *et al. J. Ginseng Res., 2012, 36(1):86-92.*

[4] Siraj F M, Sathishkumar N, Kim Y J, *et al. J. Enzym. Inhib. Med. Ch., 2014, 30(1):9-14.*

[5] Zhou W, Li J, Li X, *et al. J. Sep. Sci., 2008, 31(6-7):921-5.*

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