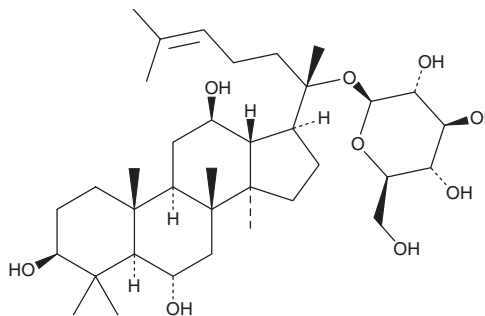


PRODUCT INFORMATION



Ginsenoside F₁ Item No. 31137

CAS Registry No.: 53963-43-2
Formal Name: (3 β ,6 α ,12 β)-3,6,12-trihydroxydammar-24-en-20-yl β -D-glucopyranoside
Synonyms: GF₁, Panaxoside A Progenin
MF: C₃₆H₆₂O₉
FW: 638.9
Purity: \geq 98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: \geq 4 years
Item Origin: Plant/*Panax ginseng*



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Ginsenoside F₁ (GF₁) is supplied as a crystalline solid. A stock solution may be made by dissolving the GF₁ in the solvent of choice, which should be purged with an inert gas. GF₁ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of GF₁ is approximately 10 mg/ml in ethanol and DMF and approximately 30 mg/ml in DMSO.

GF₁ is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, GF₁ should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. GF₁ has a solubility of approximately 0.12 mg/ml in a 1:7 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

GF₁ is a ginsenoside that has been found in *P. ginseng* and has diverse biological activities.¹⁻⁴ It increases cytotoxic degranulation of natural killer (NK) cells against K562 leukemia cells *in vitro* when used at a concentration of 10 μ M and enhances NK cell-mediated lymphoma clearance *in vivo*.¹ GF₁ (50 mg/kg) reduces atherosclerotic lesion area, whole body myeloperoxidase (MPO) levels, and aortic root NF- κ B, TLR4, and LOX-1 levels in ApoE^{-/-} mice.² It increases microvessel density and improves focal cerebral blood perfusion in a rat model of ischemic stroke induced by middle cerebral artery occlusion (MCAO).³ GF₁ also restores spatial working memory, but not context-dependent fear memory, in the APP/PS1 transgenic mouse model of Alzheimer's disease.⁴

References

1. Kwon, H.-J., Lee, H., Choi, G.-E., *et al.* Ginsenoside F1 promotes cytotoxic activity of NK cells via insulin-like growth factor-1-dependent mechanism. *Front. Immunol.* **9**, 2785 (2018).
2. Qin, M., Luo, Y., Lu, S., *et al.* Ginsenoside F1 ameliorates endothelial cell inflammatory injury and prevents atherosclerosis in mice through A20-mediated suppression of NF- κ B signaling. *Front. Pharmacol.* **8**, 953 (2017).
3. Zhang, J., Liu, M., Huang, M., *et al.* Ginsenoside F1 promotes angiogenesis by activating the IGF-1/IGF1R pathway. *Pharmacol. Res.* **144**, 292-305 (2019).
4. Han, J., Oh, J.-P., Yoo, M., *et al.* Minor ginsenoside F1 improves memory in APP/PS1 mice. *Mol. Brain* **12**(1), 77 (2019).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM