

PRODUCT INFORMATION

Polygalasaponin F

Item No. 30064

CAS Registry No.: 882664-74-6

Formal Name: (2 β ,3 β ,4 α)-3-(β -D-glucopyranosyloxy)-2,23-dihydroxy-olean-12-en-28-oic acid, O- β -D-xylopyranosyl-(1 \rightarrow 4)-O-6-deoxy- α -L-mannopyranosyl-(1 \rightarrow 2)- β -D-glucopyranosyl ester

MF: C₅₃H₈₆O₂₃

FW: 1,091.2

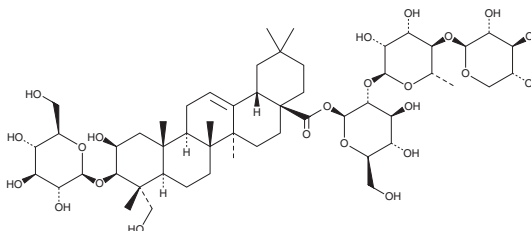
Purity: $\geq 95\%$

Supplied as: A solid

Storage: -20°C

Stability: ≥ 4 years

Item Origin: Plant/*Polygala japonica*



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

Laboratory Procedures

Polygalasaponin F is supplied as a solid. A stock solution may be made by dissolving the polygalasaponin F in the solvent of choice, which should be purged with an inert gas. Polygalasaponin F is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of polygalasaponin F in these solvents is approximately 25 and 15 mg/ml, respectively.

Polygalasaponin F is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, polygalasaponin F should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Polygalasaponin F has a solubility of approximately 0.16 mg/ml in a 1:5 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Polygalasaponin F is a triterpenoid saponin originally isolated from *Polygala japonica* and has diverse biological activities.¹⁻³ It inhibits LPS-induced increases in TNF- α and nitric oxide (NO) production, inducible nitric oxide synthase (iNOS) levels, and nuclear translocation of NF- κ B p65 in BV-2 microglia when used at concentrations of 0.1, 1, and 10 μ M.¹ Polygalasaponin F (0.1, 1, and 10 μ M) inhibits rotenone-induced increases in intracellular reactive oxygen species (ROS) levels, decreases in mitochondrial membrane potential, and induction of apoptosis in PC12 cells.² Intracerebroventricular administration of polygalasaponin F (1 and 10 μ M) induces long-term potentiation in the hippocampal dentate gyrus in anesthetized rats, an effect that can be prevented by the NMDA receptor inhibitor MK-801 or the calcium/calmodulin-dependent protein kinase (CaMKII) inhibitor KN-93 (Item Nos. 13319 | 13864 | 21472).³

References

1. Wei, W., Yuan, Y.-H., Gao, Y.-N., *et al.* Polygalasaponin F inhibits secretion of inflammatory cytokines via NF- κ B pathway regulation. *J. Asian Nat. Prod. Res.* **16**(8), 865-875 (2014).
2. Wu, M.-M., Yuan, Y.-H., Chen, J., *et al.* Polygalasaponin F against rotenone-induced apoptosis in PC12 cells via mitochondria protection pathway. *J. Asian Nat. Prod. Res.* **16**(1), 59-69 (2014).
3. Sun, F., Sun, J.-D., Han, N., *et al.* Polygalasaponin F induces long-term potentiation in adult rat hippocampus via NMDA receptor activation. *Acta Pharmacol. Sin.* **33**(4), 431-437 (2012).

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