

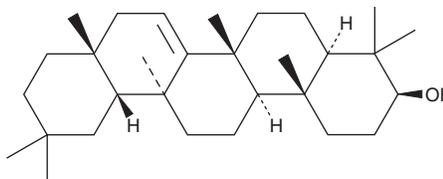
PRODUCT INFORMATION



Taraxerol

Item No. 40136

CAS Registry No.: 127-22-0
Formal Name: 13 α -methyl-27-norolean-14-en-3 β -ol
Synonyms: Alnulin, Skimmiol, 3 β -Taraxerol, (+)-Taraxerol
MF: C₃₀H₅₀O
FW: 426.7
Purity: \geq 95%
Supplied as: A crystalline solid
Storage: -20°C
Stability: \geq 4 years
Item Origin: Plant/*Cyclocarya paliurus*



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

Laboratory Procedures

Taraxerol is supplied as a crystalline solid. A stock solution may be made by dissolving the taraxerol in the solvent of choice, which should be purged with an inert gas. Taraxerol is slightly soluble (0.1-1 mg/ml) in chloroform and methanol.

Taraxerol is slightly soluble (0.1-1 mg/ml) in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Taraxerol is a pentacyclic triterpene that has been found in *T. officinale* and has diverse biological activities.¹⁻³ It reduces proliferation of MDA-MB-468 and SK-BR-3 breast cancer cells (IC₅₀s = 100.5 and 84.48 μ M, respectively).¹ It inhibits nuclear factor erythroid 2-related factor 2 (Nrf2), promotes degradation of glutathione peroxidase 4 (GPX4), and induces ferroptosis in MDA-MB-468 and SK-BR-3 cells. *In vivo*, taraxerol (10 mg/kg) reduces tumor growth in an SK-BR-3 mouse xenograft model. Taraxerol reduces the levels of COX-2 and inducible nitric-oxide synthase (iNOS) in LPS-stimulated RAW 264.7 macrophages when used at concentrations of 20 and 40 μ M and decreases the production of the pro-inflammatory mediators nitrite, prostaglandin E₂ (PGE₂; Item No. 14010), IL-6, IL-1 β , and TNF- α in the same cells.² Taraxerol (20 mg/kg) reduces hyperglycemia in a rat model of type 2 diabetes induced by a high-fat diet and streptozotocin (STZ; Item No. 13104).³ It also increases skeletal muscle PI3K and membrane-associated glucose transporter 4 (GLUT4) levels and insulin receptor substrate 1 (IRS-1), Akt, and AMP-activated protein kinase (AMPK) phosphorylation in the same model.

References

1. Du, P., Han, A., Liu, J., *et al.* Taraxerol induces ferroptosis in breast cancer by targeting Nrf2 transcriptional activity to promote MIB2-mediated GPX4 ubiquitination. *Phytomedicine* **145:157024**, (2025).
2. Yao, X., Li, G., Bai, Q., *et al.* Taraxerol inhibits LPS-induced inflammatory responses through suppression of TAK1 and Akt activation. *Int. Immunopharmacol.* **15(2)**, 316-324 (2013).
3. Khanra, R., Bhattacharjee, N., Dua, T.K., *et al.* Taraxerol, a pentacyclic triterpenoid, from *Abroma augusta* leaf attenuates diabetic nephropathy in type 2 diabetic rats. *Biomed. Pharmacother.* **94**, 726-741 (2017).

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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