

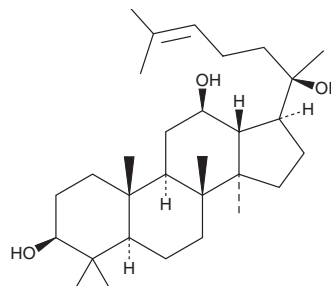
PRODUCT INFORMATION



20(R)-Protopanaxadiol

Item No. 25052

CAS Registry No.: 7755-01-3
Formal Name: dammar-24-ene-3 β ,12 β ,20R-triol
Synonym: Protopanaxadiol
MF: C₃₀H₅₂O₃
FW: 460.7
Purity: \geq 98%
UV/Vis.: λ_{max} : 262 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: \geq 4 years



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

Laboratory Procedures

20(R)-Protopanaxadiol is supplied as a crystalline solid. A stock solution may be made by dissolving the 20(R)-protopanaxadiol in the solvent of choice. 20(R)-Protopanaxadiol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of 20(R)-protopanaxadiol in ethanol and DMF is approximately 2 mg/ml and approximately 10 mg/ml in DMSO.

20(R)-Protopanaxadiol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 20(R)-protopanaxadiol should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 20(R)-Protopanaxadiol has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

(20R)-Protopanaxadiol is a saponin that has been found in *P. ginseng* and has anticancer and antibacterial activities.¹⁻³ It has a cytotoxic concentration (CC₅₀) value of 6.1 μ M in MT-4 human T cell leukemia cells and inhibits the growth of several additional cancer cell lines, including A549 human lung carcinoma, SKOV3 human ovarian adenocarcinoma, SK-Mel-2 human melanoma, P388 and L1210 murine leukemia, and K562 human chronic leukemia cells (ED₅₀s = 11-26 μ M).^{1,2} (20R)-protopanaxadiol also inhibits the growth of *H. pylori* *in vitro* (MICs = 50-100 μ g/ml).³

References

1. Nam-In, B., Kim, D.S., Lee, Y.H.L., *et al.* Cytotoxicities of ginseng saponins and their degradation products against some cancer cell lines. *Arch. Pharm. Res.* **18(3)**, 164-168 (1995).
2. Hasegawa, H., Matsumiya, S., Uchiyama, M., *et al.* Inhibitory effect of some triterpenoid saponins on glucose transport in tumor cells and its application to *in vitro* cytotoxic and antiviral activities. *Planta Med.* **60(3)**, 240-243 (1994).
3. Bae, E.A., Han, M.J., Choo, M.K., *et al.* Metabolism of 20(S)- and 20(R)-ginsenoside Rg3 by human intestinal bacteria and its relation to *in vitro* biological activities. *Biol. Pharm. Bull.* **25(1)**, 58-63 (2002).

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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