

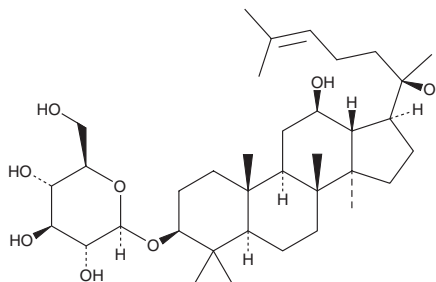
PRODUCT INFORMATION



20(R)-Ginsenoside Rh₂

Item No. 27300

CAS Registry No.: 112246-15-8
Formal Name: 12 β ,20R-dihydroxydammar-24-en-3 β -yl β -D-glucopyranoside
MF: C₃₆H₆₂O₈
FW: 622.9
Purity: \geq 98%
Supplied as: A solid
Storage: -20°C
Stability: \geq 4 years
Item Origin: Plant/Ginseng Radix et Rhizoma



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

Laboratory Procedures

20(R)-Ginsenoside Rh₂ is supplied as a solid. A stock solution may be made by dissolving the 20(R)-ginsenoside Rh₂ in the solvent of choice. 20(R)-Ginsenoside Rh₂ is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of 20(R)-ginsenoside Rh₂ in these solvents is approximately 10 mg/ml.

20(R)-Ginsenoside Rh₂ is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 20(R)-ginsenoside Rh₂ should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 20(R)-Ginsenoside Rh₂ 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

20(R)-Ginsenoside Rh₂ is a steroid glycoside originally isolated from *P. ginseng* and an isomer of 20(S)-ginsenoside Rh₂ (Item No. 23390) that has diverse biological activities.¹⁻³ It inhibits the replication of murine gammaherpes virus 68 (MHV-68; IC₅₀ = 2.77 μ M) and the lytic replication of human gammaherpes virus in BC3 cells.¹ 20(R)-Ginsenoside Rh₂ reduces levels of nitric oxide (NO), prostaglandin E₂ (PGE₂; Item No. 14010), reactive oxygen species (ROS), and pro-matrix metalloproteinase-9 (pro-MMP-9) in LPS-stimulated RAW 264.7 cells.² It also reduces ROS production and MMP-9 and MMP-2 activity in HaCat human keratinocytes. 20(R)-Ginsenoside Rh₂ (4 mg/kg) induces tumor cell apoptosis and reduces tumor growth in an H22 hepatocellular carcinoma mouse xenograft model.³

References

1. Kang, S., Im, K.S., Kim, G., *et al.* Antiviral activity of 20(R)-ginsenoside Rh₂ against murine gammaherpesvirus. *J. Ginseng Res.* **41(4)**, 496-502 (2017).
2. Choi, W.-Y., Lim, H.-W., and Lim, C.-J. Anti-inflammatory, antioxidative and matrix metalloproteinase inhibitory properties of 20(R)-ginsenoside Rh₂ in cultured macrophages and keratinocytes. *J. Pharm. Pharmacol.* **65(2)**, 310-316 (2013).
3. Lv, Q., Rong, N., Liu, L.-J., *et al.* Antitumoral activity of (20R)- and (20S)-ginsenoside Rh₂ on transplanted hepatocellular carcinoma in mice. *Planta Med.* **82(8)**, 705-711 (2016).

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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