



# SZABO SCANDIC

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## Produktinformation



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# PRODUCT INFORMATION

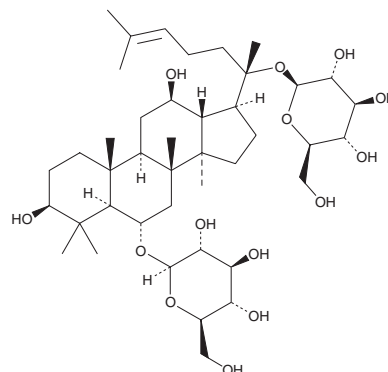


## Ginsenoside Rg<sub>1</sub>

Item No. 15315

**CAS Registry No.:** 22427-39-0  
**Formal Name:** 3β,12β-dihydroxydammar-24-ene-6α,20-diyl bis-β-D-glucopyranoside  
**Synonyms:** Ginsenoside A<sub>2</sub>, Panaxoside A, Panaxoside Rg<sub>1</sub>, Sanchinoside C1, Sanchinoside Rg<sub>1</sub>

**MF:** C<sub>42</sub>H<sub>72</sub>O<sub>14</sub>  
**FW:** 801.0  
**Purity:** ≥98%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥2 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

Ginsenoside Rg<sub>1</sub> is supplied as a crystalline solid. A stock solution may be made by dissolving the ginsenoside Rg<sub>1</sub> in the solvent of choice, which should be purged with an inert gas. Ginsenoside Rg<sub>1</sub> is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of ginsenoside Rg<sub>1</sub> in these solvents is approximately 10 mg/ml.

Ginsenoside Rg<sub>1</sub> is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ginsenoside Rg<sub>1</sub> should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Ginsenoside Rg<sub>1</sub> has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Ginsenoside Rg<sub>1</sub> is a steroid glycoside that has been found in *P. ginseng* and has diverse biological activities.<sup>1-4</sup> *In vivo*, ginsenoside Rg<sub>1</sub> (10, 20, and 40 mg/kg) decreases blood glucose, IL-1β, and IL-18 levels, increases insulin secretion, and inhibits hepatic and pancreatic activation of the NLRP3 inflammasome in a mouse model of diabetes induced by streptozotocin (STZ; Item No. 13104).<sup>1</sup> It facilitates fear extinction and decreases immobility time in the tail-suspension and forced swim tests in a mouse model of single-prolonged stress-induced post-traumatic stress disorder (PTSD).<sup>2</sup> Ginsenoside Rg<sub>1</sub> decreases hepatic alanine transaminase (ALT) and aspartate aminotransferase (AST) levels and attenuates hepatic steatosis in a mouse model of ethanol-induced hepatitis.<sup>3</sup> It also decreases the abundance of *Bacteroidetes* in the large intestine, cortical neuron apoptosis, and latency to the platform in the Morris water maze in a tree shrew model of Alzheimer's disease induced by amyloid-β (25-35) (Aβ (25-35)).<sup>4</sup>

### References

1. Gao, Y., Li, J., Chu, S., *et al.* Ginsenoside Rg<sub>1</sub> protects mice against streptozotocin-induced type 1 diabetic by modulating the NLRP3 and Keap1/Nrf2/HO-1 pathways. *Eur. J. Pharmacol.* **866**, 172801 (2020).
2. Zhang, Z., Song, Z., Shen, F., *et al.* Ginsenoside Rg<sub>1</sub> prevents PTSD-like behaviors in mice through promoting synaptic proteins, reducing Kir4.1 and TNF-α in the hippocampus. *Mol. Neurobiol.* **58(4)**, 1550-1563 (2021).
3. Yang, C., He, X., Zhao, J., *et al.* Hepatoprotection by Ginsenoside Rg<sub>1</sub> in alcoholic liver disease. *Int. Immunopharmacol.* **92**, 107327 (2021).
4. Guo, Y., Wang, L., Lu, J., *et al.* Ginsenoside Rg<sub>1</sub> improves cognitive capability and affects the microbiota of large intestine of tree shrew model for Alzheimer's disease. *Mol. Med. Rep.* **23(4)**, 291 (2021).

#### 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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