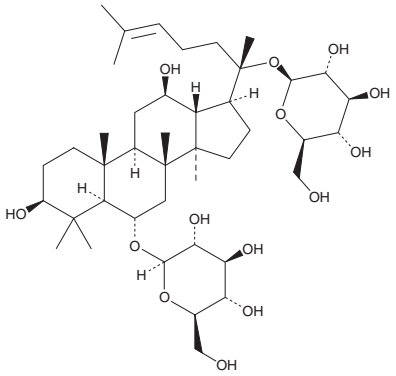
PRODUCT INFORMATION

Ginsenoside Rg_1

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_2, Panaxoside A, Panaxoside Rg_1, Sanchinoside C1, Sanchinoside Rg_1
MF:	$C_{42}H_{72}O_{14}$
FW:	801.0
Purity:	≥98%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥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

Ginsenoside Rg_1 is supplied as a crystalline solid. A stock solution may be made by dissolving the ginsenoside Rg_1 in the solvent of choice, which should be purged with an inert gas. Ginsenoside Rg_1 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of ginsenoside Rg_1 in these solvents is approximately 10 mg/ml.

Ginsenoside Rg_1 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ginsenoside Rg_1 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Ginsenoside Rg_1 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_1 is a steroid glycoside that has been found in *P. ginseng* and has diverse biological activities.[1-4] *In vivo*, ginsenoside Rg_1 (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).[1] 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).[2] Ginsenoside Rg_1 decreases hepatic alanine transaminase (ALT) and aspartate aminotransferase (AST) levels and attenuates hepatic steatosis in a mouse model of ethanol-induced hepatitis.[3] 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)).[4]

References

1. Gao, Y., Li, J., Chu, S., *et al.* Ginsenoside Rg1 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 Rg1 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 Rg1 in alcoholic liver disease. *Int. Immunopharmacol.* **92**, 107327 (2021).
4. Guo, Y., Wang, L., Lu, J., *et al.* Ginsenoside Rg1 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).

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