

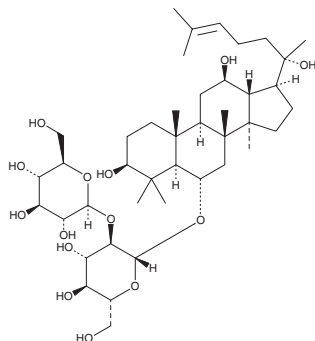
# PRODUCT INFORMATION



## Ginsenoside Rf

Item No. 23667

CAS Registry No.: 52286-58-5  
Formal Name: 3 $\beta$ ,12 $\beta$ ,20-trihydroxydammar-24-en-6 $\alpha$ -yl 2-O- $\beta$ -D-glucopyranosyl- $\beta$ -D-glucopyranoside  
MF: C<sub>42</sub>H<sub>72</sub>O<sub>14</sub>  
FW: 801.0  
Purity:  $\geq 95\%$   
Supplied as: A solid  
Storage: 4°C  
Stability:  $\geq 4$  years



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

### Laboratory Procedures

Ginsenoside Rf is supplied as a solid. A stock solution may be made by dissolving the ginsenoside Rf in the solvent of choice. Ginsenoside Rf is slightly soluble methanol.

### Description

Ginsenoside Rf is a steroid glycoside found in plants of the genus *Panax* that has diverse biological activities.<sup>1-4</sup> It inhibits production of IL-1 $\beta$ , IL-6, TNF- $\alpha$ , NO, and reactive oxygen species (ROS) in human HT-29 intestinal epithelial cells and RAW 264.7 mouse macrophages in a dose-dependent manner.<sup>2</sup> Ginsenoside Rf inhibits N-type calcium channels in rat sensory neurons (IC<sub>50</sub> = 40  $\mu$ M).<sup>1</sup> *In vivo*, ginsenoside Rf has antinociceptive effects in mice in the acetic acid abdominal constriction test and in the biphasic formalin test (ED<sub>50</sub>s = 56 and 129 mg/kg, respectively), which are models of tonic pain.<sup>3</sup> Topical administration of ginsenoside Rf (0.05% solution) reduces ear swelling by 34.8% in a mouse model of contact dermatitis.<sup>4</sup>

### References

1. Nah, S.Y., Park, H.J., and McCleskey, E.W. A trace component of ginseng that inhibits Ca<sup>2+</sup> channels through a pertussis toxin-sensitive G protein. *Proc. Natl. Acad. Sci. U.S.A.* **92**(19), 8739-8743 (1995).
2. Ahn, S., Siddiqui, M.H., Aceituno, V.C., et al. Suppression of MAPKs/NF- $\kappa$ B activation induces intestinal anti-inflammatory action of Ginsenoside Rf in HT-29 and RAW264.7 cells. *Immunol. Invest.* **45**(5), 439-449 (2016).
3. Mogil, J.S., Shin, Y.H., McCleskey, E.W., et al. Ginsenoside Rf, a trace component of ginseng root, produces antinociception in mice. *Brain Res.* **792**(2), 218-228 (1998).
4. Bae, E.A., Han, M.J., Shin, Y.W., et al. Inhibitory effects of Korean red ginseng and its genuine constituents ginsenosides Rg3, Rf, and Rh2 in mouse passive cutaneous anaphylaxis reaction and contact dermatitis models. *Biol. Pharm. Bull.* **29**(9), 1862-1867 (2006).

#### 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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