# **PRODUCT** INFORMATION



20(S)-Ginsenoside Rh<sub>2</sub>

Item No. 23390

| CAS Registry No.: | 78214-33-2                                     |     | $\backslash$ |
|-------------------|--|-----|--------------|
| Formal Name:      | 12β,20-dihydroxydammar-24-en-3β-yl,            |     | F            |
|                   | β-D-glucopyranoside                            |     |              |
| Synonym:          | 20(S)-Ginsenoside Rh <sub>2</sub>              | но  | H H          |
| MF:               | C <sub>36</sub> H <sub>62</sub> O <sub>8</sub> |     |              |
| FW:               | 622.9  | HO. |              |
| Purity:           | ≥98%   | Í   | Γ Υ Η Υ Ι Γ  |
| Supplied as:      | A crystalline solid                            | HO  |              |
| Storage:          | -20°C  | H H | Ý X H V      |
| Stability:        | ≥4 years                                       | ОН  | / \          |
|                   |  |     |              |

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

## Laboratory Procedures

Ginsenoside Rh<sub>2</sub> is supplied as a crystalline solid. A stock solution may be made by dissolving the ginsenoside  $Rh_2$  in the solvent of choice, which should be purged with an inert gas. Ginsenoside  $Rh_2$  is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of ginsenoside  $Rh_2$  in these solvents is approximately 10 mg/ml.

Ginsenoside Rh<sub>2</sub> is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ginsenoside Rh<sub>2</sub> should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Ginsenoside  $Rh_2$  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

Ginsenoside  $Rh_2$  is a steroid glycoside found in plants of the genus *Panax* that has diverse biological activities.<sup>1-5</sup> It inhibits release of  $\beta$ -hexosaminidase from RBL-2H3 cells (IC<sub>50</sub> = 100  $\mu$ M) and inhibits the IgE-dependent passive cutaneous anaphylaxis reaction in mice at a dose of 25 mg/kg.<sup>1</sup> It inhibits growth of HRA ovarian and BxPC-3 pancreatic cancer cells in a dose-dependent manner.<sup>3,4</sup> In vivo, ginsenoside Rh<sub>2</sub> decreases immobility time in the forced swim test in a mouse model of colorectal carcinoma.<sup>5</sup> Ginsenoside Rh<sub>2</sub> also reduces infarct volume in a rat model of ischemia-reperfusion-induced brain injury.<sup>2</sup>

#### References

- 1. Park, E.-K., Choo, M.-K., Kim, E.-J., et al. Antiallergic activity of ginsenoside Rh2. Biol. Pharm. Bull. 26(11), 1581-1584 (2003).
- 2. Park, E.-K., Choo, M.-K., Oh, J.K., et al. Ginsenoside Rh2 reduces ischemic brain injury in rats. Biol. Pharm. Bull. 27(3), 433-436 (2004).
- 3. Kikuchi, Y., Sasa, H., Kita, T., et al. Inhibition of human ovarian cancer cell proliferation in vitro by ginsenoside Rh2 and adjuvant effects to cisplatin in vivo. Anticancer Drugs 2(1), 63-67 (1991).
- Tang, X.-P., Tang, G.-D., Fang, C.-Y., et al. Effects of ginsenoside Rh2 on growth and migration of pancreatic cancer cells. World J. Gastroenterol. 19(10), 1582-1592 (2013).
- Wang, J., Chen, Y., Dai, C.L., et al. Ginsenoside Rh2 alleviates tumor-associated depression in a mouse 5. model of colorectal carcinoma. Am. J. Transl. Res. 8(5), 2189-2195 (2016).

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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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