

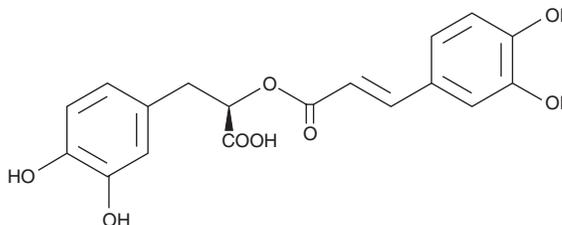
# PRODUCT INFORMATION



## Rosmarinic Acid

Item No. 70900

**CAS Registry No.:** 20283-92-5  
**Formal Name:**  $\alpha$ R-[[[(2E)-3-(3,4-dihydroxyphenyl)-1-oxo-2-propen-1-yl]oxy]-3,4-dihydroxy-benzenepropanoic acid  
**MF:** C<sub>18</sub>H<sub>16</sub>O<sub>8</sub>  
**FW:** 360.3  
**Purity:** ≥98%  
**Supplied as:** A crystalline solid  
**UV/Vis.:** λ<sub>max</sub>: 221, 291, 332 nm  
**Storage:** Room temperature  
**Stability:** ≥4 years



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

### Laboratory Procedures

Rosmarinic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the rosmarinic acid in an organic solvent, which should be purged with an inert gas. Rosmarinic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of rosmarinic acid in ethanol and DMF is approximately 35 mg/ml and approximately 25 mg/ml in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of rosmarinic acid can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of rosmarinic acid in PBS (pH 7.2) is approximately 15 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Rosmarinic acid is a naturally-occurring phenolic compound with antioxidant and anti-inflammatory properties. This compound inhibits lipid peroxidation of rat liver microsomes by 90% at a concentration of 25 μg/ml.<sup>1</sup> Rosmarinic acid suppresses endotoxin-induced activation of complement and concomitant formation of PGI<sub>2</sub>.<sup>2,3</sup> Formation of 5-HETE and LTB<sub>4</sub> from human PMNL is inhibited by rosmarinic acid at concentrations of 10<sup>-5</sup> to 10<sup>-3</sup> M.<sup>4</sup>

### References

1. Liu, G.-T., Zhang, T.-M., Wang, B., *et al.* Protective action of seven natural phenolic compounds against peroxidative damage to biomembranes. *Biochem. Pharmacol.* **43(2)**, 147-152 (1992).
2. Bult, H., Herman, A.G., and Rampart, M. Modification of endotoxin-induced haemodynamic and haematological changes in the rabbit by methylprednisolone, F(ab')<sub>2</sub> fragments and rosmarinic acid. *Br. J. Pharmacol.* **84(2)**, 317-327 (1985).
3. Rampart, M., Beetens, J.R., Bult, H., *et al.* Complement-dependent stimulation of prostacyclin biosynthesis: Inhibition by rosmarinic acid. *Biochem. Pharmacol.* **35(8)**, 1397-1400 (1986).
4. Kimura, Y., Okuda, H., Okuda, T., *et al.* Studies on the activities of tannins and related compounds, X. Effects of caffeetannins and related compounds on arachidonate metabolism in human polymorphonuclear leukocytes. *J. Nat. Prod.* **50(3)**, 392-399 (1987).

#### 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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