

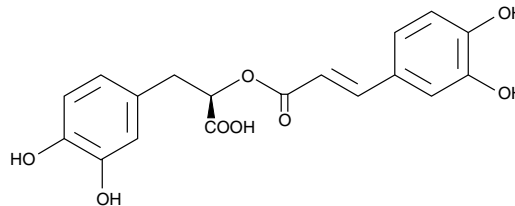
Product Information



Rosmarinic Acid

Item No. 70900

CAS Registry No.: 20283-92-5
Formal Name: (R)- α -[[3-(3,4-dihydroxyphenyl)-1-oxo-2E-propenyl]oxy]-3,4-dihydroxy-benzenepropanoic acid
MF: C₁₈H₁₆O₈
FW: 360.3
Purity: ≥98%
Stability: ≥1 year at room temperature
Supplied as: A crystalline solid
UV/Vis.: λ_{max} : 221, 291, 332 nm



Laboratory Procedures

For long term storage, we suggest that rosmarinic acid be stored as supplied at room temperature. It should be stable for at least one year.

Rosmarinic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the rosmarinic acid in an organic solvent. Rosmarinic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of rosmarinic acid in these solvents is approximately 25 mg/ml.

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 compound 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.

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 $\mu\text{g/ml}$.¹ Rosmarinic acid suppresses endotoxin-induced activation of complement and concomitant formation of PGI₂.^{2,3} Formation of 5-HETE and LTB₄ from human PMNL is inhibited by rosmarinic acid at concentrations of 10⁻⁵ to 10⁻³ M.⁴

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**, 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')₂ fragments and rosmarinic acid. *Br. J. Pharmacol.* **84**, 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**, 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**, 392-399 (1987).

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WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

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Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com