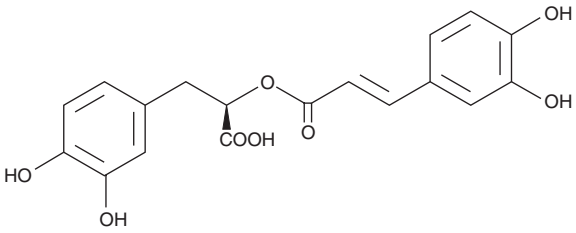
PRODUCT INFORMATION

Rosmarinic Acid

Item No. 70900

CAS Registry No.: 20283-92-5
Formal Name: αR-[[(2E)-3-(3,4-dihydroxyphenyl)-1-oxo-2-propen-1-yl]oxy]-3,4-dihydroxy-benzenepropanoic acid
MF: $C_{18}H_{16}O_8$
FW: 360.3
Purity: ≥98%
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 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.[1] Rosmarinic acid suppresses endotoxin-induced activation of complement and concomitant formation of PGI_2.[2,3] Formation of 5-HETE and LTB_4 from human PMNL is inhibited by rosmarinic acid at concentrations of 10^{-5} to 10^{-3} M.[4]

References

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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(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).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM