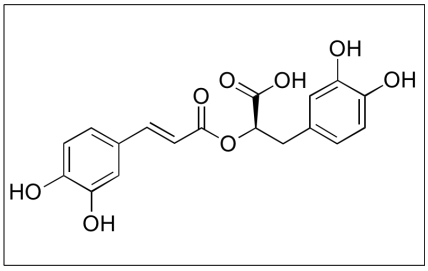
LKT Laboratories, Inc.

Rosmarinic Acid

Phone: 888-558-5227
651-644-8424
Fax: 888-558-7329
Email: getinfo@lktlabs.com
Web: lktlabs.com

Product Information

Product ID R5874
CAS No. 20283-92-5
Chemical Name 3,4-Dihydroxycinnamic acid 2-ester with 3-(3,4-dihydroxy- phenyl) lactic acid
Synonym Rosemary acid



Formula $C_{18}H_{16}O_8$
Formula Wt. 360.31
Melting Point 171-175°C
Purity ≥98%
Solubility Soluble in DMSO, ethanol, dimethyl formamide, or PBS.

Pricing and Availability

Bulk quanitites available upon request

Product ID	Size	List Price
R5874	10 mg	$44.80
R5874	25 mg	$90.00
R5874	100 mg	$262.20

Store Temp -20°C
Ship Temp Ambient

Description Rosemarinic acid is a caffeic acid ester found in many plants, including *Melissa*, *Salvia*, *Ocimum*, *Rosmarinus*, and *Origanum*. Rosemarinic acid exhibits antidepressant, neuroprotective, anti-inflammatory, anti-allergic, anti-angiogenic, anti-fibrotic, and chemopreventive activities. Rosemarinic acid inhibits GABA transaminase and decreases immobility time in animals undergoing the forced swim test. Additionally, rosemarinic acid inhibits aggregation of amyloid-ß (Aß) peptides, delaying progression of Alzheimer's disease in vivo. In animal models of OVA-induced allergy, rosemarinic acid decreases levels of IgE, IL-6, IL-1ß, and TNF-α, prevents expression of COX-2, and suppresses infiltration by mast cells and eosinophils. Rosemarinic acid also inhibits the formation of DMBA-induced oral tumors in animal models. This compound inhibits the proliferation of hepatic stellate cells, decreasing levels of α-SMA, CTGF, and TGF-ß1 and preventing CCL4-induced hepatic fibrosis. Rosemarinic acid also inhibits Fyn, a Src family kinase involved in T-cell signaling. In vitro, rosemarinic acid decreases levels of ROS, VEGF, and IL-8, suppressing cellular proliferation, migration, adhesion, and tube formation.

References

Airoldi C, Sironi E, Dias C, et al. Natural compounds against Alzheimer's disease: molecular recognition of Aß1-42 peptide by Salvia sclareoides extract and its major component, rosmarinic acid, as investigated by NMR. Chem Asian J. 2013 Mar;8(3):596 -602. PMID: 23303581.

Anusuya C, Manoharan S. Antitumor initiating potential of rosmarinic acid in 7,12-dimethylbenz(a)anthracene-induced hamster buccal pouch carcinogenesis. J Environ Pathol Toxicol Oncol. 2011;30(3):199-211. PMID: 22126613.

Oh HA, Park CS, Ahn HJ, et al. Effect of Perilla frutescens var. acuta Kudo and rosmarinic acid on allergic inflammatory reactions. Exp Biol Med (Maywood). 2011 Jan;236(1):99-106. PMID: 21239739.

Li GS, Jiang WL, Tian JW, et al. In vitro and in vivo antifibrotic effects of rosmarinic acid on experimental liver fibrosis. Phytomedicine. 2010 Mar;17(3-4):282-8. PMID: 19524418.

Ito N, Yabe T, Gamo Y, et al. Rosmarinic acid from Perillae Herba produces an antidepressant-like effect in mice through cell proliferation in the hippocampus. Biol Pharm Bull. 2008 Jul;31(7):1376-80. PMID: 18591778.

Jelić D, Mildner B, Kostrun S, et al. Homology modeling of human Fyn kinase structure: discovery of rosmarinic acid as a new Fyn kinase inhibitor and in silico study of its possible binding modes. J Med Chem. 2007 Mar 22;50(6):1090-100. PMID: 17315853.

Huang SS, Zheng RL. Rosmarinic acid inhibits angiogenesis and its mechanism of action in vitro. Cancer Lett. 2006 Aug 8;239