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-β (Aβ) 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-1β, 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-β1 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


