Forskolin is a labdane diterpene found in Coleus that exhibits vasodilatory, immunomodulatory, antihypertensive, anti-inflammatory, and anticancer chemotherapeutic activities. Forskolin activates adenylyl cyclase, increasing levels of cAMP and activating PKA. Forskolin decreases intraocular pressure in animal models of glaucoma. Additionally, forskolin inhibits IL-2-induced phosphorylation of STAT5 and activation of JAK3, decreasing T cell proliferation in vivo. This compound also decreases levels of Gli1 mRNA and inhibits Smo activity, suppressing sonic hedgehog (Shh) signaling; this inhibits basal cell carcinoma tumor growth in animal models. Forskolin also activates protein phosphatase 2A (PP2A) and enhances proteasome activity. In airway smooth muscle cells, forskolin inhibits IL-1β-induced expression of IL-8.

References


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