

〈ノート〉

毛包上皮細胞に対するフォルスコリンの作用

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Effects of Forskolin on Hair Follicular Keratinocytes

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Abstract

Forskolin is a diterpene derived from the root of *Coleus forskohlii*. It is known that forskolin is an efficacious activator of adenylate cyclase in various tissues and cells. However, response to forskolin in hair follicular keratinocytes has not been reported previously. Thus, effects of forskolin on the cells were studied. In human hair follicular keratinocytes, forskolin stimulated intracellular cAMP accumulation rapidly, reaching a maximum by approximately 15 min. Forskolin at 10^{-4} M caused a 120-fold increase in the intracellular cAMP. The effect of forskolin on cAMP was dose-dependent. Incubation of hair follicular keratinocytes with 10^{-6} M forskolin for 8 h also caused a 1.2-fold increase in the intracellular ATP. Furthermore, the cell proliferation after 14 days incubation with 10^{-6} M forskolin resulted in a 3.8-fold increase in fluorescence intensity as determined by the alamar-Blue assay. These results suggest that the accumulation of cAMP stimulated by forskolin induces the increase in the intracellular ATP and the growth of hair follicular keratinocytes.

Key words: forskolin, hair follicular keratinocytes, cAMP, ATP, cell proliferation.