

论著

桂皮醛对NIH3T3细胞c-Fos、c-Myc表达的影响

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摘要 目的: 研究肉桂主要成分桂皮醛刺激NIH3T3细胞后c-Fos、c-Myc蛋白在不同时点表达的规律,探讨桂皮醛促进NIH3T3细胞增殖的机制。方法: 采用 MTT法观察不同浓度桂皮醛对NIH3T3细胞增殖的影响; 并采用免疫细胞化学法检测桂皮醛对NIH3T3细胞c-Fos、c-Myc蛋白表达的影响。结果: 桂皮醛浓度在 $(8.8 \times 10^{-2}) - (8.8 \times 10) \mu\text{g/L}$ 浓度范围内对NIH3T3细胞具有促增殖作用。当其浓度为 $5.5 \mu\text{g/L}$ 时,促增殖作用最显著。在此浓度下,经桂皮醛刺激后,c-Fos和c-Myc蛋白均在2 h开始表达,3 h时表达明显增加。结论: 桂皮醛可以上调c-Fos、c-Myc蛋白的表达,提示桂皮醛促进细胞增殖可能与其能促进c-Fos、c-Myc快速表达有关。

关键词 桂皮醛 细胞增殖 蛋白质c-Fos 蛋白质c-Myc NIH3T3细胞

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Effects of cinnamyl aldehyde on c-Fos and c-Myc expression in NIH3T3 cells

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Abstract

AIM: Cinnamyl aldehyde (CA) is one alcohol ingredient derived from Cinnamomum cassia,which is widely used in treating chronic skin wound in Chinese medicine with the curative effect of 'rescuing YANG'.The purpose of the present study was to investigate the expression of c-Fos,c-Myc proteins at different time points in NIH3T3 treated with CA and explore the possible mechanism of promoting cell proliferation by CA.METHODS: MTT assay was used for observing cell proliferation.Expression of c-Fos and c-Myc proteins in NIH3T3 cells were assessed by immunocytochemistry assay.RESULTS: The cell proliferation was promoted obviously when CA concentration was between 8.8×10^{-2} and $8.8 \times 10 \mu\text{g/L}$.CA at concentration of $5.5 \mu\text{g/L}$ significantly induced expression of c-Fos,c-Myc proteins at 2-3 h after the stimulation compared with control group ($P < 0.01$).CONCLUSION: CA increases expression of c-Fos and c-Myc proteins,which may be one of mechanisms for CA to promote NIH3T3 cell proliferation.

Key words Cinnamyl aldehyde Cell proliferation Protein c-Fos Protein c-Myc NIH3T3 cells

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