

原代培养过程中壳聚糖衍生物对 CTCF/YB-1/C-myc 和 p53 蛋白表达的影响

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摘要: 成功建立了人增生性瘢痕细胞和正常皮肤成纤维细胞的原代培养, 并利用热休克蛋白(HSP47)和成纤维细胞特异蛋白(FSP)标记物进行了鉴定。研究发现, 经过壳聚糖衍生物处理, 人增生性瘢痕成纤维细胞和正常皮肤成纤维细胞在培养中均出现了不同类型的蛋白表达。多功能转录因子蛋白(CTCF)在壳聚糖衍生物处理的增生性瘢痕成纤维细胞中出现表达上调; 在聚糖衍生物处理的正常皮肤成纤维细胞中数量无变化。YB-1 结合蛋白在经壳聚糖处理的正常皮肤成纤维细胞与人增生性瘢痕细胞中的表达几乎无异, 但在未经壳聚糖处理的细胞中表达不同。C-MYC 和 P53 蛋白在壳聚糖衍生物处理的增生性瘢痕纤维细胞中表达上调, 但在正常皮肤成纤维细胞中, 无论是否经过壳聚糖衍生物处理, 这两种蛋白都没有表达。上述 4 种蛋白在人增生性瘢痕细胞和正常皮肤成纤维细胞中表现出不同的表达方式, 这种新型壳聚糖衍生物可能在控制人增生性瘢痕细胞和正常皮肤成纤维细胞生长和增殖过程中起着重要作用。这些蛋白因子的表达机制目前还不是完全清楚, 有待于进一步研究。

关键词: CTCF 多功能转录因子, YB-1 结合蛋白, C-MYC 和 P53 蛋白, 热休克蛋白 HSP47, 成纤维细胞特异蛋白, 增生性瘢痕细胞, 壳聚糖衍生物

CTCF/YB-1/c-myc and p53 Expression of PRIMARY Human Hypertrophic Scar and Normal Fibroblasts Skin Cells in Response to Novel Chitosan Derivatives Sheet

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Received: October 17, 2008; **Accepted:** November 25, 2008

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Abstract: The primary human hypertrophic scar and normal skin fibroblasts were successfully established and identified by HSP47 and FSP markers. On the other hand, different pattern of protein expressions were found in cultured fibroblasts from hypertrophic scar and normal fibroblasts skin cells after treatment with the chitosan derivatives sheet. The CTCF protein was up-regulated in fibroblasts hypertrophic scar upon treatment with chitosan derivatives. In contrast, the amount of CTCF protein was found unchanged in normal skin fibroblasts both treated and untreated. The YB-1 protein was expressed almost similarly in normal and hypertrophic scar when treated with chitosan but the expression differed when untreated. The c-myc and p53 proteins were expressed in fibroblasts hypertrophic scar followed by up-regulation after chitosan derivatives treatment. The c-myc and p53 expressions were not detected in normal fibroblasts neither untreated nor treated. The CTCF, YB-1, c-myc and p53 proteins behaved in different manners in human hypertrophic scar and normal fibroblasts skin cells. The novel chitosan derivatives sheet in this study may play roles in the control of cell growth and proliferation of human hypertrophic scar and normal fibroblasts skin cells. The mechanisms underlying expression of these protein factors remain unclear and further studies are still undergoing in our laboratory.

Keywords: CTCF, YB-1, c-MYC, P53, HSP47, FSP, hypertrophic scar, chitosan derivatives sheet

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