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摘要:

目的: 观察神经生长因子- β (nerve growth factor beta, NGF β) 对人胰腺癌MIA PaCa-2细胞增殖及细胞周期的影响。方法: 体外培养MIA PaCa-2细胞, 单独或联合给予不同浓度的NGF- β 和K252a (NGF- β 受体TrKA的抑制剂), 应用克隆平板实验、MTT法和流式细胞术检测NGF- β 和K252a对MIA PaCa-2细胞克隆形成率、增殖及细胞周期的影响。结果: NGF- β 显著促进MIA PaCa-2细胞的克隆形成 ($P < 0.05$), NGF- β 使MIA PaCa-2细胞增殖能力明显增强 ($P < 0.01$), K252a抑制MIA PaCa-2细胞增殖 ($P < 0.05$), NGF- β 与K252a联合作用对MIA PaCa-2细胞的增殖能力无明显影响。NGF- β 作用使MIA PaCa-2细胞周期阻滞于S期, K252a作用使其周期阻滞于G0/G1期, 两者联合作用使MIA PaCa-2细胞周期阻滞于S期。结论: NGF- β 具有促进胰腺癌MIA PaCa-2细胞增殖的作用。

关键词: [胰腺肿瘤](#) [神经生长因子](#) [细胞增殖](#) [细胞周期](#)

Nerve growth factor promotes proliferation of human pancreatic cancer cell line MIA PaCa-2 [Download Fulltext](#)

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Abstract:

Objective: To investigate the effect of nerve growth factor β (NGF- β) on the proliferation and cell cycle of human pancreatic cancer MIA PaCa-2 cells. Methods: MIA PaCa-2 cells were treated with different concentrations of NGF β and K252a (inhibitor of NGF- β receptor TrKA) alone or in combination. Clone forming rate, proliferation, and cell cycle of MIA PaCa-2 cells treated with different strategies were examined by clone formation assay, MTT, and flow cytometry, respectively. Results: NGF- β significantly increased the clone formation and proliferation of MIA PaCa-2 cells ($P < 0.05$, $P < 0.01$). K252a significantly inhibited the proliferation of MIA PaCa-2 cells ($P < 0.05$), while NGF- β combined with K252a had no significant effect on the proliferation of MIA PaCa-2 cells. NGF- β arrested MIA PaCa-2 cell cycle in S phase, K252a arrested cell cycle in G0/G1 phase, and NGF- β combined with K252a arrested cell cycle in S phase. Conclusion: NGF- β can enhance the proliferation of pancreatic carcinoma MIA PaCa-2 cells.

Keywords: [pancreatic carcinoma](#) [nerve growth factor](#) [proliferation](#) [cell cycle](#)

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