[1]焦燕,邱倩,杨再兴,等.淋巴细胞微粒刺激AKT/Foxo1阻滞气道上皮细胞周期的研究[J].第三军医大学学报,2012,34(24):2498-2502.
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淋巴细胞微粒刺激AKT/Foxo1阻滞气道上皮细胞周

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Title: Lymphocyte particles stimulates AKT/Foxo1 blocking airway epithelial cell cycle *in vitro*

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关键词: 细胞周期阻滞; 淋巴细胞微粒; Foxo1; AKT; P21; P27; p-Foxo1; p-AKT

Keywords: cell cycle arrest; lymphocyte microparticles; Foxo1; AKT; P21; P27; p-Foxo1; p-AKT

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摘要: 目的 研究淋巴细胞微粒(lymphocyte microparticles，LMPs)作用于气道上皮细胞引起周期阻滞在G_1期的机制通路。 方法 将人类正常气道上皮细胞培养到对数生长期时，20 μg/ml的LMPs按照不同的时间0、4、8、16、20、24 h刺激气道上皮细胞，用RT-PCR方法检测P21、P27在mRNA水平的表达情况。20 μg/ml的LMPs按照不同的时间0、4、8、16、24 h刺激气道上皮细胞，用Western blot 方法检测P21、P27、Foxo1、p-Foxo1、AKT、p-AKT的蛋白表达情况。用免疫细胞化学技术检测Foxo1的核定位情况。 结果 与0 h对比，20 μg/ml的LMPs作用于气道上皮细胞能使P21、P27的mRNA、蛋白水平显著升高（$P<0.01$），Foxo1蛋白水平无明显变化($P>0.05$)，p-Foxo1的蛋白水平表达减弱($P<0.01$)，AKT蛋白水平无明显变化($P>0.05$)，p-AKT蛋白水平表达减弱($P<0.01$)。 结论 LMPs作用于气道上皮细胞上调P21、P27蛋白的表达引起周期阻滞G_1期,可能是通过AKT/Foxo1信号通路调节。

Abstract: Objective To determine the effect of lymphocyte microparticles (LMPs) on the cell cycle of airway epithelial cells and investigate the underlying mechanism. Methods LMPs of 20 μg/ml was treated human normal airway epithelial cells at logarithmic growth period for 0, 4, 8, 16, 20 and 24 h respectively. RT-polymerase chain reaction (PCR) was used to detect the expression of P21 and P27 at mRNA level. Western blot analysis was employed to test the expression of P21, P27, Foxo1, p-Foxo1, AKT and p-AKT at protein level. Immunocytochemical assay was to test the nuclear localization of Foxo1.

Results LMPs of 20 μg/ml resulted in an obvious increase of P21 and P27 at mRNA and protein levels (P<0.01). No change was found in Foxo1 and AKT protein levels (P>0.05), but their phosphorylated proteins were evidently down-regulated (P<0.01). Conclusion LMPs upregulates P21 and P27 expression and causes cell cycle arrested at G_1 phase in the airway epithelial cells through AKT/Foxo1 signaling pathways.

参考文献/REFERENCES

焦燕, 邱倩, 杨再兴, 等. 淋巴细胞微粒刺激AKT/Foxo1阻滞气道上皮细胞周期的研究[J]. 第三军医大学学报,2012,34(24):2498-2502.

备注/Memo: -