

论文 SKI-II抑制Sphk1的表达对胃癌细胞株SGC7901细胞周期的影响

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摘要:

目的 研究SKI-II对胃癌SGC7901细胞周期的阻滞作用,并探讨其相关分子机制。**方法** 常规培养胃癌SGC7901细胞,SKI-II单用或联合顺铂干预,流式细胞术检测细胞周期;免疫细胞化学、Western blot检测药物作用后细胞中Sphk1、P27的表达。**结果** SKI-II单用或联合顺铂干预48h后,各用药组细胞周期停滞在G0/G1期比例增多,与阴性对照组相比差异有统计学意义($P<0.05$);联合用药组比SKI-II单用组作用明显($P<0.05$);SGC7901细胞中P27阳性表达率增加,Sphk1阳性表达率减少,与阴性对照组相比差异有统计学意义($P<0.05$)。Pearson相关分析显示:SGC7901细胞中Sphk1与P27的表达呈负相关。**结论** SKI-II通过抑制Sphk1的表达进而上调P27的表达诱导肿瘤细胞周期阻滞,抑制肿瘤细胞增殖。

关键词: SKI-II; SGC7901细胞; 胃肿瘤; 细胞周期

Effect of SKI-II on SGC7901 cell cycle by inhibiting the Sphk1 expression

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Abstract:

Objective To study the effect of SKI-II on arresting gastric cancer SGC7901 cell cycle, and explore the mechanisms. **Methods** SGC7901 cells were treated with SKI-II alone or in combination with cisplatin, and the cell cycle was analyzed by flow cytometry. Expressions of Sphk1 and P27 were detected by immunocytochemistry and Western-blot. **Results** After being treated with SKI-II alone or in combination with cisplatin for 48h, the ratio of cells arresting in the G0/G1 phase was increased, compared with the control group($P<0.05$); the effect of combined treatment group was more significant ($P<0.05$). Expression of P27 in SGC7901 cells was increased, while expression of Sphk1 was decreased, compared with the control group($P<0.05$). Pearson correlation analysis showed that expressions of Sphk1 and P27 were negatively related. **Conclusion** SKI-II could arrest gastric cancer SGC7901 cell cycle and inhibit cell growth through increased expression of P27, which was regulated by inhibiting expression of Sphk1.

Keywords: SKI-II; SGC7901 cells; Stomach neoplasm; Cell cycle

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