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白藜芦醇对人胃癌SGC7901细胞的抑制及其可能的机制 点此下载全文

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摘要：

摘 要 目的: 探讨白藜芦醇（resveratrol,Res）对人胃癌SGC7901细胞的抑制及其可能的作用机制。方法：以Res（10、20、40 μg/ml）作用人胃癌SGC7901细胞，同时设溶剂二甲亚砜(DMSO)和培养液作用为对照组;采用MTT法检测Res对人胃癌SGC7901细胞生长的抑制情况,相差显微镜观察细胞形态变化，比色法检测Res对SGC7901细胞Caspase-3活性的影响,流式细胞术检测Res对SGC7901细胞周期的影响。结果：Res对SGC7901细胞生长有明显抑制作用，且有剂量和时间依赖性，最大抑制率达（53.39±5.32）%； Res作用于SGC7901细胞后可见悬浮细胞增多，细胞胞体缩小、变圆、碎裂，细胞内出现颗粒样物质，在40 μg/ml作用48 h变化最明显；Res能明显上调SGC7901细胞Caspase-3活性，这种作用呈时间与浓度依赖性；流式细胞术发现，Res通过阻滞SGC7901于S期而抑制细胞分裂。结论：Res明显抑制人胃癌SGC7901细胞的生长，其机制可能是与激活Caspase-3从而诱导细胞凋亡、以及影响肿瘤细胞周期有关。

关键词：白藜芦醇 胃癌细胞 增殖抑制 caspase 3 细胞周期

Inhibitory effect of resveratrol on human gastric cancer cell line SGC7901 and the possible mechanism Download Fulltext

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Abstract:

Abstract Objective:To investigate the inhibitory effect of Resveratrol (Res) on human gastric cancer cell line SGC7901 and the related mechanism.Methods: Human gastric cancer SGC7901 cells were treated with different concentrations of Res（10, 20, 40 μg/ml）; cells treated with DMSO and culture medium served as controls. The growth inhibition rate of SGC7901 cells was examined by MTT assay; the morphological changes of cells were observed under phase contrast microscope; caspase 3 activity was assessed by colorimetry; and the cell cycle was detected by flow cytometry(FCM). Results: Res inhibited the growth of SGC7901 cells in a time and dose dependent manner, with maximal inhibitory rate being (53.39±5.32)%. After Res treatment the amount of suspended cell increased and the cells shrank, became round and smashed, with particle like substance found in the cells. The most obvious changes were found 48 h after treatment with 40 μg/ml Res. Besides, Res upregulated the Caspase 3 activity in SGC7901 cells in a time and concentration dependent manner. Flow cytometry revealed that Res induced the S phase arrest of SGC7901 cells. Conclusion: Res can obviously inhibit the growth of human gastric cancer SGC7901 cells, possibly through activating Caspase 3,inducing cell apoptosis and influencing cell cycle.

Keywords:Res SGC7901 cell mechanism

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