165~168.组蛋白去乙酰化酶抑制剂MS-275对人宫颈癌SiHa细胞增殖及凋亡的影响[J].闫洪亮,吴维光,王筝,孙兆翎,唐雅娟.中国肿瘤生物治疗杂志,2014,21(2)

组蛋白去乙酰化酶抑制剂MS-275对人宫颈癌SiHa细胞增殖及凋亡的影响 点此下载全文

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基金项目：

DOI：10.3872/j.issn.1007-385X.2014.02.009

摘要：

目的： 观察组蛋白去乙酰化酶抑制剂MS-275对人宫颈癌SiHa细胞增殖和凋亡的影响，并探讨其可能的机制。 方法： 以MS-275（0、5、10、20 μmol/L）作用于人宫颈癌SiHa细胞，MTT法检测细胞的增殖，流式细胞术检测细胞的凋亡，Western blotting法检测细胞内乙酰化组蛋白H4（acetylhistone4，Ac-H4）水平，RT-PCR检测 p 21和 p 53 mRNA的表达。 结果： MS-275作用后，人宫颈癌SiHa细胞增殖受到抑制、细胞凋亡增加，20 μmol/L MS-275作用下，细胞增殖率仅为（13 95±8 91）%，凋亡率高达（38 38±1 78）%，显著高于其他各组（ P < 0 01）。MS-275作用后，细胞内Ac-H4水平增加（ P < 0 01）， p 21和 p 53 mRNA表达增加（均 P < 0 01）。 结论： MS-275可抑制人宫颈癌SiHa细胞的增殖，诱导SiHa细胞凋亡；上调 p 21和 p 53表达、提高组蛋白乙酰化水平可能是其作用机制之一。

关键词：宫颈癌 组蛋白脱乙酰化酶抑制剂 MS-275 增殖 凋亡

Effect of histone deacetylase inhibitor MS-275 on proliferation and apoptosis in human cervical carcinoma SiHa cells Download Fulltext

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Abstract:

Objective : To investigate the effect of histone deacetylase (HDAC) inhibitor MS-275 on proliferation and apoptosis in human cervical carcinoma cells as well as the mechanisms underlying the effect. Methods: The human cervical carcinoma cell line, SiHa, was used as a model. SiHa cells were treated with histone deacetylase inhibitor MS-275 at 5, 10, and 20 μmol/L, respectively, for 48 h. The cell viability was assessed by MTT assays and the rate of cell apoptosis was determined by flow cytometry. Levels of acetyl histone H4 and p21 and p53 gene transcripts were analyzed by Western blotting and RT-PCR respectively. Results: MS-275 treatment resulted in an decrease in cellular growth activity and increases in apoptosis acetyl level of histone H4 and p21 and p53 mRNA abundance in SiHa cells in a concentration-dependent manner. Conclusion: Histone deacetylase inhibition may effectively inhibit the cellular proliferation and induce apoptosis in cervical carcinoma cells. The mechanisms underlying these effects may involve increased acetylation of histone up-regulated expression of p21 and p53.

Keywords:cervical carcinoma histone deacetylases inhibitor MS-275 proliferation apoptosis

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