

论著

前列腺癌PC-3M细胞hmSD活性与细胞凋亡相关性的实验研究

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摘要 目的: 研究前列腺癌PC-3M细胞株hmSD的活性与细胞凋亡的相关性。方法: 应用丁酸钠诱导前列腺癌PC-3M细胞发生凋亡, 吖啶橙/溴化乙锭染色检测细胞凋亡率; 收集丁酸钠作用后的PC-3M细胞, 匀浆后离心取上清, 与底物共同孵育, 以硫代巴比妥酸(TBA)显色反应检测所生成的唾液酸, 计算唾液酸酶活性; 将细胞凋亡率与hmSD活性进行相关性分析。结果: 丁酸钠诱导PC-3M细胞凋亡的同时显著下调hmSD的活性, 凋亡率与hmSD活性呈负相关。结论: hmSD活性变化与前列腺癌细胞凋亡呈相关性。

关键词 [神经氨酸酶](#); [前列腺肿瘤](#); [PC-3M细胞](#); [细胞凋亡](#); [丁酸盐类](#)

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Relation between hmSD activity and apoptosis rate in a PC-3M cell line

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Abstract

AIM: To investigate the correlation between human membrane-associated sialidase (hmSD) activity and apoptosis rate in a PC-3M cell line. METHODS: Sodium butyrate was added to the culture media of PC-3M cells for 48 h to induce apoptosis and then the cells were collected, homogenated and centrifuged. The supernatant was incubated with the substrate. TBA reaction was then used to detect the sialic acid and the activity of the sialidase was calculated. Meanwhile, the apoptosis rate was detected by AO/EB assay, and the correlation between hmSD activity and apoptosis rate was calculated. RESULTS: HmSD activity of PC-3M cells was significantly down-regulated when cell apoptosis was induced by sodium butyrate and high correlation between hmSD activity and apoptosis rate was observed. CONCLUSION: There is a significant correlation between apoptosis rate and hmSD activity in prostate cancer.

Key words [Neuraminidase](#) [Prostatic neoplasms](#) [PC-3M cells](#) [Apoptosis](#) [Butyrates](#)

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