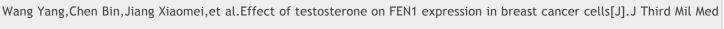
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[1]王杨,陈彬,姜晓梅,等.睾酮对乳腺癌细胞中FEN1表达的影响[J].第三军医大学学报,2013,35(02):95-98.









## 睾酮对乳腺癌细胞中FEN1表达的影响(PDF)

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Title: Effect of testosterone on FEN1 expression in breast cancer cells

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关键词: 乳腺肿瘤;细胞系;肿瘤;睾酮;DNA瓣核酸内切酶类

breast neoplasms; cell line; tumor; testosterone; flap endonucleases Keywords:

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探讨睾酮 (testosterone, T) 在乳腺癌细胞中对瓣状核酸内切酶 (flap 摘要: 目的

> endonuclease 1, FEN1) 表达的影响及其机制。 以MCF-7作为研究对 方法 象,采用RT-PCR观察雌二醇 (17**B**-estradiol, E2) 单独作用以及分别与雌激素受体 (estrogen receptor, ER) 拮抗剂ICI182, 780 (ICI) 和MAPK途径抑制剂U0126共同 作用时FEN1表达的变化。以MCF-7aro (芳香化酶过表达的MCF-7) 作为研究对象, 采 用RT-PCR观察加入单独的睾酮以及睾酮和芳香化酶抑制剂来曲唑 (letrozole) 共同作 用时FEN1表达的变化;采用Western blot观察睾酮单独作用以及分别与来曲唑和U0126 共同作用时FEN1、p-ERK和p-Elk的变化。 结果 与对照组比较,加入雌二醇后 MCF-7细胞中FEN1 mRNA的表达升高2.04倍 (P<0.01) , 加入ICI和U0126后分别降低 10.63倍和2.17倍(P<0.01)。加入睾酮后MCF-7aro细胞中FEN1 mRNA的表达升高1.66

> 倍 (P<0.01), 蛋白的表达升高1.80倍 (P<0.01); 加入来曲唑后FEN1 mRNA的表达下 降2.38倍,蛋白的表达降低1.84倍,加入U0126后蛋白的表达降低2.28倍(P<0.01);

> 加入睾酮后ERK和Elk-1的磷酸化水平分别升高2.28倍和2.60倍(P<0.01),加入来曲唑 后ERK和Elk-1的磷酸化水平分别降低2.60倍和2.37倍(P<0.01) ,加入U0126后ERK和 Elk-1的磷酸化水平分别降低10.38倍和119.50倍(P<0.01)。 结论 睾酮可通过

MAPK途径上调MCF-7 aro细胞中FEN1的表达。

Abstract: Objective To determine the effect of testosterone on the expression of flap

> endonuclease 1 (FEN1) in breast cancer. Methods The expression of FEN1 in MCF-7 cells was observed by RT-PCR after the cells were treated with 17Bestradiol (E2), E2 combined with ICI182, 780, an estrogen receptor antagonist, and

E2 combined with U0126, a MEK inhibitor, respectively. In MCF-7 cells over-

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expressing aromatase (MCF-7/Aro), the expression of FEN1 was observed by RT-PCR when cells were treated with testerone or testerone combined with letrozole, one of aromatase inhibitors. The expression of FEN1 protein, p-ERK and p-Elk was observed by Western blotting when the cells were treated with testosterone, testosterone combined with letrozole, or combined with U0126. Results In MCF-7 cells, E2 resulted in an increase in the expression of FEN1 mRNA by 2.04 folds (P<0.01), which was inhibited by ICI182,780 or U0126 (10.63 and 2.17 folds, P < 0.01) . In MCF-7aro cells, testosterone resulted in an increase in the expression of FEN1 at mRNA and protein levels by 1.66 and 1.80 folds respectively (P<0.01) , which was inhibited by letrozole (2.38 and 1.84 folds, P<0.01) or U0126 (2.28 folds for protein only, P<0.01). Testosterone increased the phosphorylation of p-ERK and p-Elk by 2.28 and 2.60 folds, which was inhibited by letrozole by 10.38 folds or U0126 by 119.50 folds (P<0.01) . Conclusion Testosterone up-regulates FEN1 in MCF-7aro cells through MAPK signaling pathway.

## 参考文献/REFERENCES

王杨, 陈彬, 姜晓梅, 等. 睾酮对乳腺癌细胞中FEN1表达的影响[J]. 第三军医大学学报, 2013, 35(2):95-98.