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截短型LEF-1 对 HeLa细胞系生物学行为的影响及其相关机制

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Effects and Related Mechanisms of Truncated LEF-1 Isoforms on Biological Behavior of HeLa Cell Lines

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摘要 目的 探讨淋巴细胞增强因子（LEF-1）截短亚型对宫颈癌HeLa细胞迁移的影响及其分子机制。方法 利用PCR方法从人淋巴结cDNA文库中克隆LEF-1截短型的编码基因，将其插入pCDNA3.1/V5-His载体中构建截短型LEF-1的真核表达质粒，脂质体法将重组质粒pcDNA3.1-Δ-LEF-1转染HeLa细胞，G418筛选稳定表达目的基因的细胞株，Western blot鉴定目的基因的表达，流式细胞术分析转染后细胞的增殖，凋亡和胞周期变化，以及CXCR4的表达情况；细胞外基质实验检测细胞的黏附能力；Transwell检测细胞的迁移能力。结果成功构建截短型LEF 1真核表达质粒，获得稳定表达LF-1截短亚型的HeLa细胞株，目的基因稳定表达，转染后的细胞增殖速度减慢，凋亡增加，细胞阻滞在G0/G1期，迁移能力降低，CXCR4的表达降低。结论LEF-1截短亚型可以抑制HeLa细胞增殖和迁移，而这种调控作用可能和CXCR4的表达有关。

关键词： LEF-1 增殖 凋亡 迁移 宫颈癌 CXCR4

Abstract:

Abstract:Objective To study the effects of truncated LEF- 1 isoforms on the biological behavior of HeLa cell lines and the related mechanisms.Methods Truncated LEF-1 gene was obtained by PCR from human s lymphoid node cDNA library and inserted into pCDNA3.1/V5 His vector to construct the eukaryotic expression plasmid pcDNA3.1-Δ-LEF-1.Using LipofectamineTM 2000, the plasmid pcDNA3.1-Δ-LEF-1 or empty vector was transfected into Hela cells.Then the stable cell lines which expressed the truncated LEF 1 isoforms was screened by G418 and expression of target protein was identified by Western blot.Subsequently, the proliferation, apoptosis, cell cycle and expression of CXCR4 of transgenic cell lines were analyzed by flow cytometry.In addition, the capability of adhesion and migration of transgenic cell lines were investigated by extracellular matrigel adhesion assay and transwell assay respectively.Results The truncated LEF- 1 eukaryotic expression plasmid and the stable HeLa cell lines expressing the truncated LEF1 isoforms were constructed successfully.The proliferation of the transgenic cell lines was inhibited, but their apoptosis was increased, meanwhile the cells were blocked at G0/G1 stage.The ability of adhesion and migration of the transgene cell lines were reduced and the expression of CXCR4 was upregulated.Conclusion The truncated LEF -1 isoforms can inhibit the proliferation and migration of HeLa cells, and promote their apoptosis, which maybe depend on the expression CXCR4 partly.

Key words: LEF-1 Proliferation Apoptosis Migration Uterine cervix cancer CXCR4

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没有本文参考文献

[1] 彭琬昕;孙瑶湘;龚爱华;金洁;邵根宝 . Egr-1对低氧应激下肝癌细胞BEL-7402黏附和迁移能力的影响[J]. 肿瘤防治研究, 2012, 39(2): 146-149.

[2] 王炜;王志彬;高玉环 . 国产雷帕霉素对人淋巴瘤细胞Raji增殖的影响[J]. 肿瘤防治研究, 2012, 39(2): 157-160.

[3] 孙军;胡俊波;陈洪雷;李蓓芸;夏和顺 . 不同宫颈组织中PIK3CA、PTEN和p16蛋白表达及其与HPV16/18感染的关系[J]. 肿瘤防治研究, 2012, 39(2): 189-194.

[4] 牛国晓;李洁. 半枝莲抗肿瘤机制研究进展[J]. 肿瘤防治研究, 2012, 39(2): 231-233.

[5] 刘瑶;贺兴波;谢军;孟凡;杨建琼;黄才斌 . 5-氮杂-2′-脱氧胞苷对肝癌细胞HepG2凋亡及其PEG10基因表达的影响[J]. 肿瘤防治研究, 2012, 39(1): 9-12.

[6] 刘磊玉;赵彬佳惠;秦玮;陈媛媛;林锋;邹海峰;于晓光 . 转染PDCD5基因促进顺铂诱导前列腺癌细胞的凋亡作用[J]. 肿瘤防治研究, 2012, 39(1): 32-35.

[7] 周防震;张晓元;孙奋勇;郭勇 . 二氢杨梅素对人乳腺癌细胞MDA-MB-231的体外抗增殖作用[J]. 肿瘤防治研究, 2012, 39(1): 95-97.

[8] 沈险华;董丽萍;吴绪峰 . 宫颈癌转移至远处胆道系统1例报道[J]. 肿瘤防治研究, 2012, 39(1): 120-120.

[9] 汪长林;赵名;于晓妩;马健;张琪 . 2-氯脱氧腺苷(2-CDA)对人黑色素瘤细胞系A375生物学性质的影响[J]. 肿瘤防治研究, 2011, 38(9): 986-990.

[10] 陈香丽;张王刚;王连才;郭建民;张茵;马肖容;田玮 . IFN-γ对白血病细胞株FBL-3细胞生物学行为的影响 [J]. 肿瘤防治研究, 2011, 38(9): 983-985.

[11] 孟爱国;刘春艳 . N-马来酰-L-缬氨酸酯姜黄素诱导胃癌MGC-803细胞凋亡的机制 [J]. 肿瘤防治研究, 2011, 38(9): 995-997.

[12] 袁青;陈晓鹏;黄晓峰;穆士杰;胡兴斌;尹文;张献清 . Apogossypolone诱导前列腺癌PC-3细胞在体外的自噬[J]. 肿瘤防治研究, 2011, 38(9): 1006-1011.

[13] 卢洁;王春美;盛光耀 . FLT3靶向抑制诱导急性髓细胞白血病细胞凋亡的实验研究 [J]. 肿瘤防治研究, 2011, 38(9): 979-982.

[14] 彭兴春;余明华;骆志国;崔培林 . 褪黑素对肺癌A549细胞诱导的血管内皮细胞增殖的影响[J]. 肿瘤防治研究, 2011, 38(9): 1002-1005.

[15] 周云;黄纯兰;李录克;李晓明 . 威灵仙皂苷对急性早幼粒细胞白血病细胞株NB4细胞的凋亡诱导作用及其机制[J]. 肿瘤防治研究, 2011, 38(8): 881-885.

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