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siRNA沉默 KLF4 的表达促进食管癌KYSE140细胞的增殖及迁移 [点此下载全文](#)

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摘要:

目的: 探讨体外沉默Kruppel样因子4 (Kruppel like factor 4, KLF4) 基因的表达对食管癌KYSE140细胞增殖及迁移的影响。方法: Western blotting法检测人食管癌细胞株KYSE140、KYSE150、EC109及EC9706及食管永生化细胞NE3中KLF4蛋白的表达, 化学合成2对靶向 KLF4 的siRNA (KLF4-siRNA1, KLF4-siRNA2), 并设对照siRNA (Ctrl-siRNA), 分别体外转染至高表达 KLF4 的食管癌KYSE140细胞中, 形成KLF4-siRNA1-KYSE140、KLF4-siRNA2-KYSE140及Ctrl-siRNA-KYSE140细胞, 通过MTT实验、Transwell实验分别检测转染后食管癌 KYSE140细胞的增殖及迁移。结果: 食管癌细胞株KYSE140中 KLF4蛋白的表达明显高于KYSE150、EC109及EC9706细胞株[(5.62 ± 0.02) vs (1.71 ± 0.23) 、 (3.24 ± 0.35) 、 (3.16 ± 0.41)], 均 $P < 0.05$]。KLF4-siRNA1-KYSE140、KLF4-siRNA2-KYSE140与Ctrl-siRNA-KYSE140细胞相比, KLF4蛋白表达明显降低[(0.49 ± 0.18) 、 (0.32 ± 0.09) vs (0.98 ± 0.19)], 均 $P < 0.05$]。细胞增殖能力明显增高[(1.2 ± 0.8) 、 (1.4 ± 0.1) vs (0.6 ± 0.1)], 均 $P < 0.05$]。迁移细胞数量也明显增加[(780 ± 22) 、 (475 ± 25) vs (83 ± 17) 个, $P < 0.05$]。结论: KLF4 在人食管癌细胞的增殖和迁移过程中起着负调控作用。

关键词: [Kruppel样因子4基因](#) [食管癌](#) [KYSE140细胞](#) [增殖](#) [迁移](#)

Silencing KLF4 expression by siRNA promotes proliferation and migration of esophageal cancer KYSE140 cells [Download Fulltext](#)

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Abstract:

Objective: To investigate the effect of in vitro silencing Kruppel like factor 4 (KLF4) gene expression on the proliferation and migration of esophageal cancer KYSE140 cells. Methods: Western blotting was used to detect the expression of KLF4 protein in the esophageal cancer cell lines, including KYSE140, KYSE150, EC109 and EC9706, and immortalized esophageal NE3 cells. Two pairs of siRNAs targeting KLF4 (KLF4-siRNA1, KLF4-siRNA2) and control siRNA (Ctrl-siRNA) were chemically synthesized, and were transfected into KYSE140 cells with a high expression of KLF4 in vitro to form KLF4-siRNA1-KYSE140, KLF4-siRNA2-KYSE140 and Ctrl-siRNA-KYSE140 cells. The proliferation and migration of esophageal cancer KYSE140 cells after transfection were detected by MTT assay and Transwell assay, respectively. Results: The expression of KLF4 in KYSE140 cells was higher than that in KYSE150, EC109 and EC9706 cells [5.62 ± 0.02] vs [1.71 ± 0.23], [3.24 ± 0.35], [3.16 ± 0.41], both $P < 0.05$]. Compared with that in Ctrl-siRNA-KYSE140 cells, the expression of KLF4 protein was significantly decreased in KLF4-siRNA1-KYSE140 and KLF4-siRNA2-KYSE140 cells [0.49 ± 0.18], [0.32 ± 0.09] vs [0.98 ± 0.19], both $P < 0.05$], the capacities of proliferation were significantly increased [1.2 ± 0.8], [1.4 ± 0.1] vs [0.6 ± 0.1], both $P < 0.05$], and the numbers of migration were also significantly increased [780 ± 22], [475 ± 25] vs [83 ± 17], $P < 0.05$]. Conclusion: KLF4 functions as a negative regulator in the proliferation and migration of esophageal cancer cells.

Keywords: [Kruppel like factor 4 \(KLF4\) gene](#) [esophageal cancer](#) [KYSE140 cell](#) [proliferation](#) [migration](#)

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