MYB基因沉默抑制子宫颈癌细胞侵袭、迁移及其作用机制探讨

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Title: **Inhibition of invasion and migration of cervical cancer cells by MYB gene silencing and its mechanism**

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摘要: 目的：探究沉默转录因子MYB对子宫颈癌细胞侵袭、迁移的影响以及可能的作用机制。方法：将携带MYB目的片段的siRNA转染入人子宫颈癌HeLa细胞中。实验分为对照组、阴性对照组和siRNA-MYB组。采用荧光定量PCR（qPCR）和蛋白质印迹法（Western Blot）检测转染效果。细胞划痕实验和Transwell法检测细胞的迁移、侵袭能力。Western Blot检测各组细胞中基质金属蛋白酶-2（MMP-2）、钙黏蛋白E（E-cadherin）、钙黏蛋白N（N-cadherin）、波形蛋白（Vimentin）水平。结果：与对照组相比，阴性对照组细胞中MYB的表达量、细胞侵袭、迁移均无显著变化，差异不具有统计学意义；siRNA-MYB组细胞中MYB的表达量显著降低（P<0.05），沉默MYB显著抑制子宫颈癌细胞的侵袭、迁移（P<0.05），并下调细胞中MMP-2、N-cadherin、Vimentin蛋白的表达量（P<0.05），上调E-cadherin蛋白的表达量（P<0.05）。结论：沉默宫颈癌细胞中MYB的表达量可通过抑制EMT、下调MMP-2蛋白水平，从而降低细胞的侵袭、迁移能力。

Abstract: Objective：To investigate the effect of silencing MYB on the invasion and migration of cervical cancer cells and its possible mechanism.Methods：siRNAs was transfected into human cervical cancer HeLa cells to silence the expression of MYB gene.The experiments were divided into control group，negative control group and siRNA-MYB group.Transfection efficiency was examined by qPCR and Western Blot.The migration and invasion of cells were analyzed by cell scratch test and Transwell assay.The protein levels of matrix metalloproteinase-2（MMP-2），E-cadherin，N-cadherin and Vimentin were examined by Western Blot.Results：Compared with the control group，there was no significant change in the expression of MYB，the invasion and migration of cells in the negative control group.The expression of MYB in the siRNA-MYB group was significantly lower than that in the control group（P<0.05）.Silencing MYB significantly inhibited the invasion and migration of cervical cancer cells（P<0.05），down-regulated the expression of MMP-2，N-cadherin，and Vimentin proteins（P<0.05），and up-regulated the expression of E-cadherin protein（P<0.05）.Conclusion：The expression of MYB can be inhibited the invasion and migration ability of cervical cancer cells by inhibiting EMT and down-regulating the level of MMP-2 protein，thus reducing the invasion and migration of cells.

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