

Knockdown of NUDT21 Inhibits Cell Proliferation and Cell Migration, Promotes Apoptosis in Prostate Cancer

Department of Urology, Dalian Municipal Central Hospital, Dalian, Liaoning Province, China

Nudix Hydrolase 21 (NUDT21) is a newly characterized oncogene involved in several types of cancer. However, the expression patterns and biological function of NUDT21 in prostate cancer (PCa) remain unclear. The present study aimed to investigate the roles of NUDT21 in the cell proliferation and metastasis of PCa. In the present study, the expression of NUDT21 was analyzed by qRT-PCR in PCa cell lines and human prostatic stromal cell line (WPMY). Compared with WPMY cells, NUDT21 expression was significantly increased in DU 145 and LNCap cells. Furthermore, we constructed the DU 145 and LNCap cell lines with stable low expression of NUDT21 to validate the function of NUDT21. Celigo cell count assay, flow cytometry, wound healing and Transwell assays were performed to analyze and compare cell viability and cell migration. These results showed that lentivirus-mediated NUDT21 knockdown significantly inhibited DU 145 and LNCap 786-O cell proliferation and migration, as well as induced cell cycle arrest and increased apoptosis in vitro. In overall, the present findings demonstrated that NUDT21 plays an oncogenic role in PCa and the potential of NUDT21 targeting in PCa treatment.

Keywords:

Introduction

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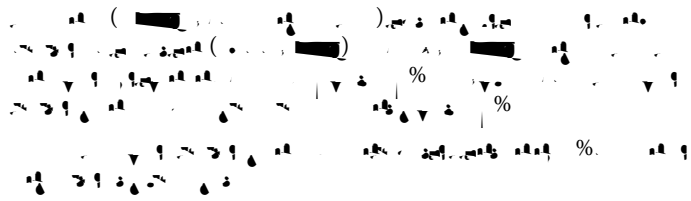
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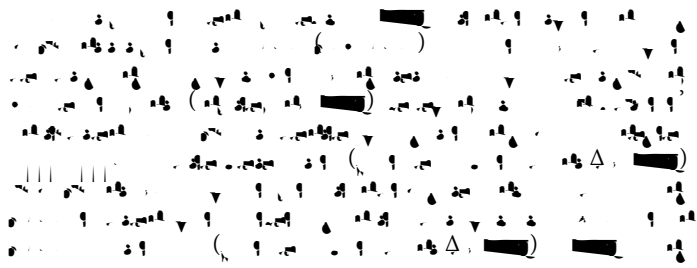
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Real-time Quantitative PCR Detecting System (qRT-PCR)



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Figure 10 shows the results of the wound healing assay. The wound healing assay is a method used to evaluate the migration and proliferation of cells in vitro. In this assay, a wound is created in a cell monolayer, and the time taken for the cells to migrate and fill the wound is measured. The results show that the knockdown of NUDT21 significantly inhibited the migration and proliferation of PCa cells in vitro.

NUDT21 knockdown inhibited PCa cell migration in vitro

The wound healing assay results are shown in Figure 10. The results show that the knockdown of NUDT21 significantly inhibited the migration and proliferation of PCa cells in vitro. The wound healing assay is a method used to evaluate the migration and proliferation of cells in vitro. In this assay, a wound is created in a cell monolayer, and the time taken for the cells to migrate and fill the wound is measured. The results show that the knockdown of NUDT21 significantly inhibited the migration and proliferation of PCa cells in vitro.

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Discussion

The results of this study show that the knockdown of NUDT21 significantly inhibited the migration and proliferation of PCa cells in vitro. This finding is consistent with previous studies that have shown that NUDT21 is involved in cell proliferation and migration. The results of this study suggest that NUDT21 may be a potential target for the treatment of PCa.

