PRINT: ISSN 0972-3757 ONLINE: ISSN 2456-6330
International Journal of
HUMAN GENETICS

Full text open access online (Since 2001)

PRINT: ISSN 0972-3757 ONLINE: ISSN 2456-6330
Int J Hum Genet, 23(4): 207-215 (2023)
DOI: 10.31901/24566322.2023/23.04.811

Role of miR-129-5p in Proliferation and Invasion of Prostate Cancer Cells

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KEYWORDS Invasion. miR-129-5p. Proliferation. Prostate Cancer

ABSTRACT The researchers were intended to inquire into the part of miR-129-5p in prostate cancer (PCa) cells. MiR-129-5p overexpression was achieved following transfection of miR-129-5p mimics into PCa PC-3 cells. Breeding as well as various treatments of nude mice was performed in a specific pathogen-free (SPF) environment. After successful construction of a transplanted tumour, 27 nude mice were randomly assigned into mimics-NC, control and miR-129-5p mimics groups (n=9). Following miR-129-5p overexpression, weakened invasion and migration abilities were noticed in PC-3 cells. The bioinformatics prediction results signified the existence of miR-129-5p binding sites in HOXC10. MiR-129-5p targeted and impeded HOXC10 expression. The miR-129-5p mimics group exhibited a notable diminution in the volume and weight of the transplanted tumour in contrast to the mimics-NC group ($P<0.05$). It shows the suppression of PCa PC-3 cell invasion and tumour tissue ontogenesis *in vivo* by miR-129-5p through regulating the protein level of HOXC10.