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

Int J Hum Genet, 22(1): 16-25 (2022)
PRINT: ISSN 0972-3757 ONLINE: ISSN 2456-6330
DOI: 10.31901/24566330.2022/22.01.785

miR-625-3p Regulates Transcription Factor 21 (TCF21) Expression to Enhance Radio-resistance of Hepatoma Cells

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KEYWORDS Cell Proliferation. Hepatoma. miR-625-3p. Radio-resistance. TCF21

ABSTRACT miR-625-3p regulates cell functions in various cancers. However, its role in radio-resistance in hepatoma remains to be unveiled. This study aims at investigating the functions of miR-625-3p in hepatoma. RT-PCR detected miR-625-3p/TCF21 expression in hepatoma tissues and cell line. MTT assays were conducted to analyze the miR-625-3p role in regulations of radio-resistance of hepatoma cells. Overall survival was evaluated in correlation to miR-625-3p among patients. Luciferase reporter experiments validated the predicted TCF21 as miR-625-3p target. Higher miR-625-3p expression was discovered in hepatoma patients. In tissues of radio resistant patients, miR-625-3p was higher. The overexpression of miR-625-3p increased the radio-resistance of hepatoma cells to irradiation. miR-625-3p adversely moderated TCF21 via binding to the 3'UTR of TCF21. Downregulating miR-625-3p promoted the cell sensitivity to irradiation, which was reversed by TCF21 inhibition.