

Full text open access online (Since 2001)



Kamla-Raj IJHG 2024

PRINT: ISSN 0972-3757 ONLINE: ISSN 2456-6330

Int J Hum Genet, 24(2): 183-192 (2024)

DOI: 10.31901/24566322.2024/24.02.827

MiR-874-3p Promotes Onset and Progression of Hodgkin's Lymphoma by Affecting P-MNK1 and PDHA1 Proteins

Qingfang Zeng*, Qinghua Lan, Tao Zhan, Jianming Zhong and Xiaojian Wang

Internal Medicine Area Three, Ganzhou Cancer Hospital, Ganzhou 341000, Jiangsi Province, China

KEYWORDS Hodgkin's Lymphoma. miR-874-3p. PDHA1. p-Mnk1. Prognosis. Survival

ABSTRACT The researchers aimed to investigate the associations among miR-874-3p, phosphorylated mitogen-activated protein kinase-interacting kinase 1 (p-Mnk1) and pyruvate dehydrogenase E1 subunit alpha 1 (PDHA1), as well as to explore their roles in the onset and progression of Hodgkin's lymphoma (HL). Flow cytometry, Western blotting, quantitative reverse transcription-polymerase chain reaction, and assays of luciferase, immunofluorescence and cell counting kit-8 were employed to assess the functions of miR-874-3p in affecting the severity and prognosis of HL patients. HL patients presented notably lowered miR-874-3p expression. Besides, with respect to nucleus pulposus (NP) cells, miR-874-3p was negatively correlated with p-Mnk1, and down-regulated PDHA1 expression. Following miR-874-3p overexpression, NP cells exhibited increased aggrecan expression. MiR-874-3p hardly affected NP cell apoptosis, whereas down-regulating miR-874-3p not only promoted extracellular matrix degradation but also suppressed NP cell proliferation. The miR-874-3p/p-Mnk1/PDHA1 axis may work as a promising marker in diagnosing and treating HL.