

Up-regulation of 91H promotes tumor metastasis and predicts poor prognosis for patients with colorectal cancer

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Shukui Wang Nanjing Medical University, China

Background: Long noncoding RNAs (IncRNAs) play widespread roles in gene regulation and cellular processes. However, the functional roles of lncRNAs in colorectal cancer (CRC) are not yet well elucidated. The aim of the present study was to measure the levels of lncRNA 91H expression in CRC and evaluate its clinical significance and biological roles in the development and progression of CRC.

Methods: 91H expression and copy number variation (CNV) were measured in 72 CRC tumor tissues and adjacent normal tissues by real-time PCR. The biological roles of 91H were evaluated by MTT, scratch wound assay, migration and invasion assays, and flow cytometry.

Results: 91H was significantly overexpressed in cancerous tissue and CRC cell lines compared with adjacent normal tissue and a normal human intestinal epithelial cell line. Moreover, 91H over expression was closely associated with distant metastasis and poor prognosis in patients with CRC, except for CNV of 91H. Multivariate analysis indicated that 91H expression was an independent prognostic indicator, as well as distant metastasis. Our in vitro data indicated that knockdown of 91H inhibited the proliferation, migration, and invasiveness of CRC cells.

Conclusions: 91H played an important role in the molecular etiology of CRC and might be regarded as a novel prognosis indicator in patients with CRC.

Biography

Shukui Wang completed his PhD from Nanjing Medical University in 2006. He further studied in Stanford University as a visiting Scholar in 2006. He is the Vice President of Nanjing Hospital affiliated to Nanjing Medical University. His research was focused on tumor pathogenesy, gene therapy. He has published more than 40 SCI papers in reputed journals. He is a peer reviewer of many Journals such as WJG, WJMA, Molecular Genetics and Genomics, BMC Medical Genetics and Lung Cancer.

shukwang@163.com