

Roles of DDX5 in the tumorigenesis, proliferation, differentiation, metastasis and pathway regulation of human malignancies

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Abstract

The DEAD-box RNA helicase DDX5 is a member of a family of highly conserved proteins involved in gene-expression regulation and ATP-dependent RNA helicase activities. Recently, it has been reported to be aberrantly expressed in many tumors, and is linked to the regulation of many cancer-related pathways. It co-activates many transcription factors, with profound implications for cancer development, and the de-regulation of its functions is ultimately associated with tumor formation and progression. Moreover, it is strongly implicated in the tumorigenesis, invasiveness and metastasis, as well as the proliferation of several cancer types. In this review, we seek to elucidate the role of DDX5 in the development and progression of human malignancies and put forward its prospective applications in future cancer research.

Keywords: DDX5; tumorigenesis; human malignancies; apoptosis

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