

Expression of SOX 10 gene in U87 cell treated with siRNAs

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Abstract

Gliomas, tumours arise from glial cells, are the most common primary brain tumours of the central nervous system. Its incidence and mortality rates are still rising. An increasing number of studies have reported that SOX 10 plays an important role in various cancers. However, the role of SOX10 in gliomas remains inadequately appreciated. In this study, we aimed to investigate the biological role and potential molecular mechanism of SOX10 in gliomas. We found that the mRNA and protein expression levels of SOX10 were prevalently and significantly overexpressed in human glioma cell lines. We performed gene knockout experiments by transfecting glioma cell line, U87 with SOX10 small interfering RNAs (siRNA). The treatment was done using three types of siRNAs. It showed that SOX10 siRNA transfection significantly suppressed mRNA and protein expression of SOX10 in glioma cells. Furthermore, knockdown of SOX10 significantly inhibited cell proliferation and invasion, but promoted apoptosis in glioma cells. Our data suggest that knockdown of SOX10 inhibits glioma cell growth and invasion, possibly by downregulating downstream oncogenic proteins, providing novel insights into the development of glioma therapy through targeting of SOX10.

Keywords: Glioma; SOX10; siRNA; U87; gene expression

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