Girdin

Girdin, an actin-binding protein, is associated with cell migration and is expressed at high levels in glioma cells. However, the association between girdin and the development of glioma remains to be elucidated. In the present study, short-hairpin RNA technology was used to silence the gene expression of girdin. The effects of girdin silencing on glioma cell proliferation, migration and invasion were then assessed using a cell viability assay, wound-healing assay, transwell invasion assay, reverse transcription-quantitative polymerase chain reaction, western blot analysis and gelatin zymography. The results suggested that girdin silencing inhibited the proliferation, migration and invasion of glioma cells. In addition, the expression levels and activity of matrix metalloproteinase (MMP)-2 and MMP-9 were also affected by girdin silencing. Further mechanistic investigation indicated that girdin may regulate glioma cell migration and invasion through the phosphatidylinositol-3-kinase/protein kinase B (PI3K-Akt) signaling pathway. Therefore, the results of the present study provide a theoretical foundation for the development of anticancer drugs [1].

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Ni W, Fang Y, Tong L, Tong Z, Yi F, Qiu J, Wang R, Tong X. Girdin regulates the migration and invasion of glioma cells via the PI3K-Akt signaling pathway. Mol Med Rep. 2015 Jul 7. doi: 10.3892/mmr.2015.4049. [Epub ahead of print] PubMed PMID: 26151295.