Krüppel-like factor 9

Krüppel-like factors (KLFs) are zinc finger-containing transcription factors that play key roles in the regulation of differentiation and development as well as biological processes central to the development of malignancies. Increasing evidence indicates that Krüppel-like factor 9 (KLF9) plays a critical role in regulating tumorigenesis. However, the biological role and molecular mechanism of KLF9 in glioma progression remain unclear. Herein, we found that KLF9 expression was strongly reduced in gliomas. Reduced KLF9 expression promoted glioma cell proliferation. Importantly, re-constitution of KLF9 expression inhibited glioma cell proliferation and tumor growth in vivo. Furthermore, we determined that KLF9 interacted with the miR-21 promoter, leading to suppression of miR-21 expression and cell cycle arrest. Taken together, our findings indicate a novel mechanism for KLF function in tumorigenesis and may also suggest new targets for clinical intervention in human cancer [1)].

1)
Huang S, Wang C, Yi Y, Sun X, Luo M, Zhou Z, Li J, Cai Y, Jiang X, Ke Y. Krüppel-like factor 9 inhibits glioma cell proliferation and tumorigenicity via downregulation of miR-21. Cancer Lett. 2015 Jan 28;356(2 Pt B):547-55. doi: 10.1016/j.canlet.2014.10.007. Epub 2014 Oct 8. PubMed PMID: 25305446.