circCPA4

Circular RNAs (circRNAs) are reported to play vital roles in tumour process and might be potential prognostic biomarkers and therapeutic targets for tumours. But the expression and function of circRNAs in glioma remain unclear.

Peng et al. performed circRNA microarray analysis of glioma tissues and matched normal brain tissue samples to explore the circRNA profile in glioma. GO analysis, KEGG and Reactom pathway analysis of linear mRNA transcripts corresponding to circRNAs were performed to study the involved biological process and pathways. The clinical significance of the selected circRNA was investigated by Kaplan-Meier survival analysis. Relevant biological function, such as cell proliferation and metastasis, was detected in vitro and in vivo. And possible mechanism of the regulatory function of the selected circRNA in glioma was explored. We found that circCPA4 (hsa_circ_0082374) up-regulated the most in glioma tissues and high levels of circCPA4 were positively related to poor outcome of glioma. And knockdown of circCPA4 suppresses cell proliferation and metastasis in glioma. Moreover, circCPA4 interacts with let-7 and serves as a sponge for let-7. Through the competitive endogenous RNA (ceRNA) mechanism, circCPA4 sponges let-7 to regulate the expression of CPA4 and glioma progression. The circCPA4/let-7/CPA4 axis regulates glioma progression by ceRNA mechanism, and circCPA4 could be a novel prognostic biomarker and target for glioma treatment [1].

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Peng H, Qin C, Zhang C, Su J, Xiao Q, Xiao Y, Xiao K, Liu Q. circCPA4 acts as a prognostic factor and regulates the proliferation and metastasis of glioma. J Cell Mol Med. 2019 Aug 19. doi: 10.1111/jcmm.14541. [Epub ahead of print] PubMed PMID: 31424161.