Tristetraprolin

The RNA-binding protein tristetraprolin (TTP) is an adenine/uridine (AU)-rich elements (AREs)-binding protein that can induce the decay of AREs containing mRNAs.

Zeng et al., demonstrated that TTP is significantly down-regulated in human glioma tissue samples and cell lines. It is also associated with diminished survival in glioma patients. Gain- and loss-of-function studies demonstrated that TTP inhibited the growth, migration and invasion of glioma cells through regulation of interleukin (IL)-13. Furthermore, mechanistic investigations showed that TTP attenuated activation of PI3K/AKT/mTOR pathway by IL-13, and the ectopic expression of IL-13 markedly abrogated the anti-invasive effect of TTP. Additionally, TTP were found inversely correlated with IL-13 in glioma specimens. In conclusion, the results suggested that the low expression of TTP is significantly associated with the growth and metastasis of human glioma cells by targeting IL-13, while TTP may be a potential therapeutic target for glioma treatment [1)]

1)
Zeng B, Zhu D, Su Z, Li Z, Yu Z. Tristetraprolin exerts tumor suppressive functions on the tumorigenesis of glioma by targeting IL-13. Int Immunopharmacol. 2016 Oct;39:63-70. doi: 10.1016/j.intimp.2016.07.001. Epub 2016 Jul 15. PubMed PMID: 27424080.