Tripartite motif 47

Angiogenesis is required for tumor progression; thus, its investigation can be useful to identify strategies for potential cancer treatments. Tripartite motif 47 (TRIM47) is involved in the progression of multiple cancers. However, its role in glioma angiogenesis is largely unknown.

Wang et al. first showed that TRIM47 is frequently upregulated in gliomas, and increased TRIM47 levels are correlated with microvascular density. They then examined the role of TRIM47 in cellular functions related to angiogenesis in vitro and observed that TRIM47 knockdown significantly reduced human umbilical vein endothelial cell proliferation, migration, and tube formation. They also found that TRIM47 silencing reduced vessel density and tumor volume in glioma xenografts. Mechanistically, TRIM47 negatively regulated Smad4 expression in glioma cells, and SMAD4 knockdown rescued the suppressive effects of TRIM47 silencing. Taken together, the results indicate that TRIM47 promotes angiogenesis in gliomas by downregulating SMAD4. Therefore, targeting the TRIM47/SMAD4 axis may offer an innovative approach to glioma treatment [1)].

1)
Wang Z, Li Z, Han C, Cheng Y, Wang K. TRIM47 promotes glioma angiogenesis by suppressing Smad4. In Vitro Cell Dev Biol Anim. 2022 Oct 6. doi: 10.1007/s11626-022-00722-6. Epub ahead of print. PMID: 36203070.