# miR 29a

Grb2-associated binding 1 (Gab1) expression and microRNA-29a-3p ("miR-29a-3p") expression in human glioma cells and tissues were tested by Western blotting assay and qRT-PCR assay. shRNA/siRNA strategy was applied to silence Gab1 in human glioma cells. miR-29a or anti-sense miR-29a construct was transfected to human glioma cells. Cell proliferation was tested by BrdU ELISA assay and cell counting assay.

Shao et al., from the Department of Neurosurgery, the Third Affiliated Hospital of Soochow University, Changzhou, China show that expression of Gab1 was significantly elevated in human glioma tissues and cells, which correlated with downregulation of its putative microRNA: miR-29a-3p. In A172 glioma cells and primary human glioma cells, Gab1 shRNA/siRNA inhibited Akt-Erk activation and cell proliferation. Forced-expression of miR-29a-3p downregulated Gab1, inhibiting glioma cell proliferation, whereas miR-29a-3p was in-effective on cell proliferation in Gab1-silenced A172 cells. Furthermore, introduction of a 3'-untranslated region (3'-UTR) mutant Gab1 (UTR-G160A) blocked miR-29a-3p-induced inhibition on Akt signaling and A172 cell proliferation.

miR-29a-3p downregulation leads to Gab1 upregulation to promote glioma cell proliferation [1].

1)
Shao NY, Wang DX, Wang Y, Li Y, Zhang ZQ, Jiang Q, Luo W, Cao C. MicroRNA-29a-3p Downregulation Causes Gab1 Upregulation to Promote Glioma Cell Proliferation. Cell Physiol Biochem. 2018 Jul 17;48(2):450-460. doi: 10.1159/000491776. [Epub ahead of print] PubMed PMID: 30016785.