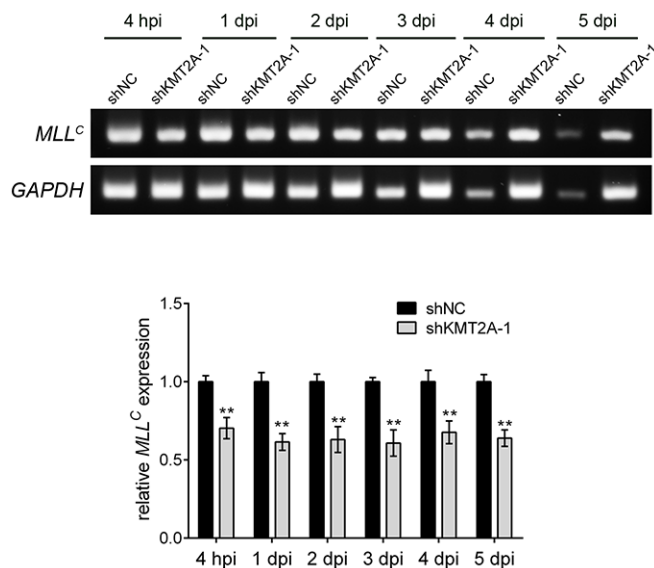


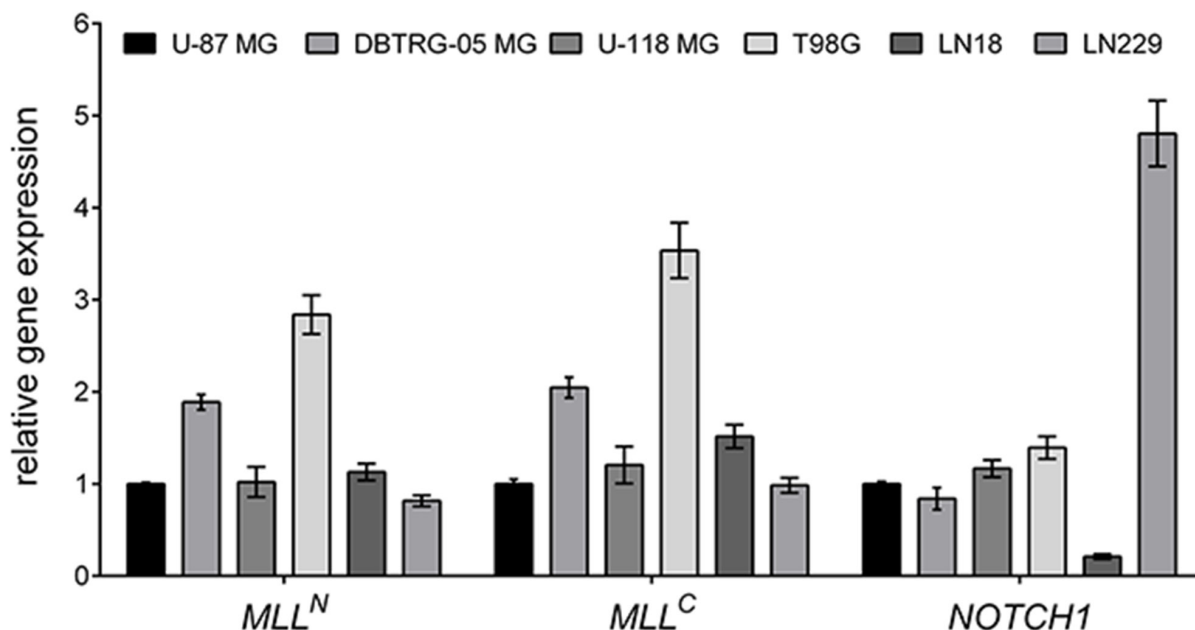
Epigenetic regulation of NOTCH1 and NOTCH3 by KMT2A inhibits glioma proliferation

SUPPLEMENTARY MATERIALS

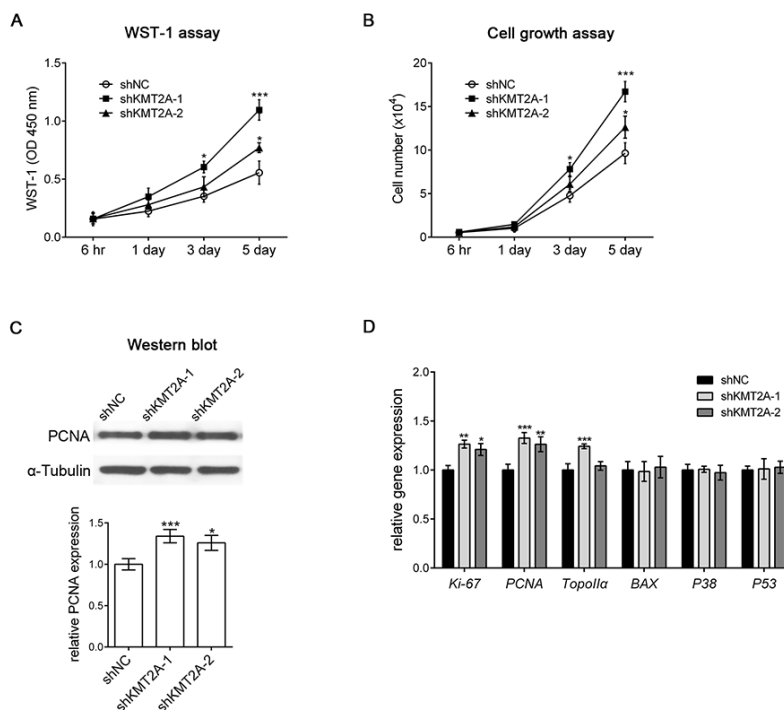
SUPPLEMENTARY FIGURES AND TABLE



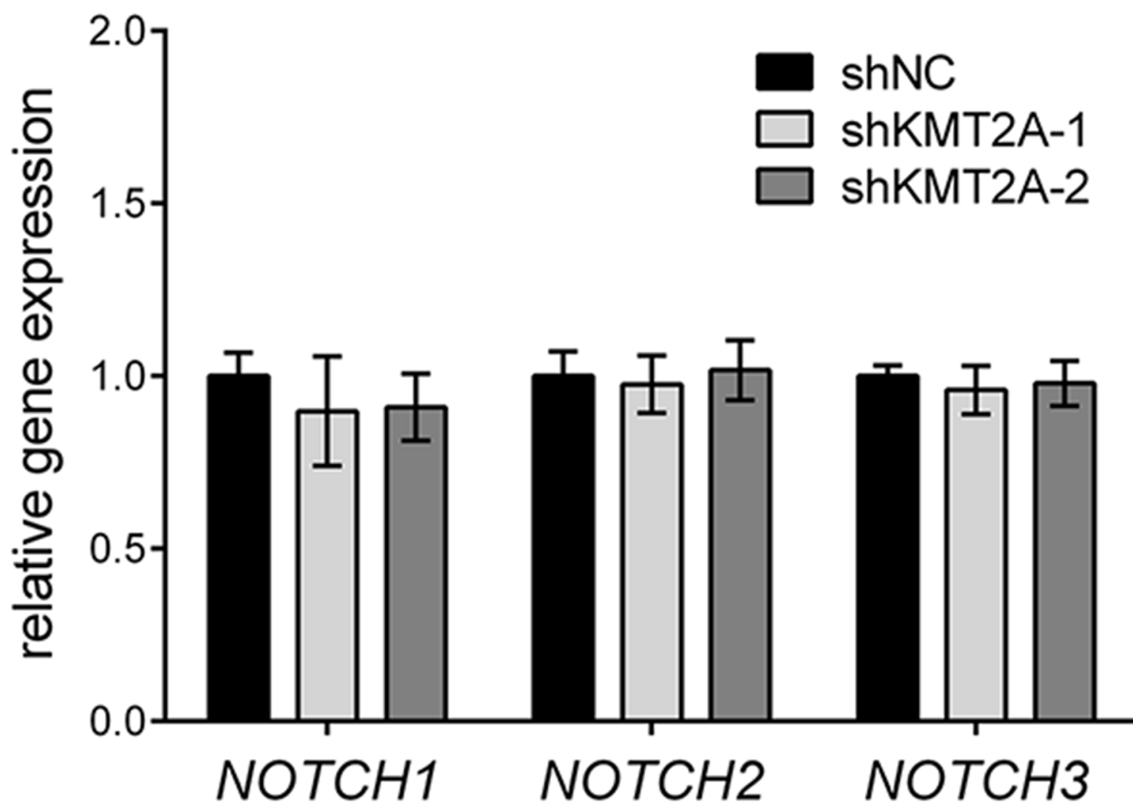
Supplementary Figure 1: *shKMT2A* was effective at all analysis stages. The effectiveness of *shKMT2A* was examined by detecting the expression of *MLL^C* fragments by using qRT-PCR at different time points, and the result revealed that *shKMT2A* was functional and sufficient for inhibiting *KMT2A* expression at all analysis stages. In the controls (shNC), the gradually decreased expression of *MLL^C* was due to the reduced size of the tumor graft. Therefore, quantification was performed by normalizing the expression of *MLL^C* in the *shKMT2A*-transfected sample to the *GAPDH* expression level and then normalizing to the expression of *MLL^C* in the controls.



Supplementary Figure. 2: Different expression levels of KMT2A and NOTCH1 in brain tumor cells. RT-PCR analysis showing MLLN, MLLC, and NOTCH1 are expressed in different levels in different brain tumor cells.



Supplementary Figure. 3: shKMT2A induces U-118 MG cell proliferation. WST-1 assay (A), cell growth assay (B), and Western blot analysis with PCNA antibody (C) demonstrated that shKMT2A induces U-118 MG cell proliferation. (D) Cell proliferation and survival markers were analyzed using real-time RT-PCR, showing that shKMT2A induces proliferation markers [Ki-67, PCNA, and Topoisomerase II α (TopoII α)] without significant alteration of apoptosis markers (BAX, P38 MAPK, and P53). (E) Representative images revealing that shKMT2A induces the growth of U-118 MG cells. Cells were stained with crystal violet. *, $p < 0.05$; **, $p < 0.01$; ***, $p < 0.001$.



Supplementary Figure. 4: KMT2A knockdown does not affect NOTCH expression. The expression of NOTCH was examined using real-time PCR. In KMT2A-deficient U-118 MG cells, the expression levels of NOTCH1, NOTCH2, and NOTCH3 were not altered by KMT2A shRNAs .

Supplementary Table 1: The complete list of primer sequences used in this study.

See Supplementary File 1