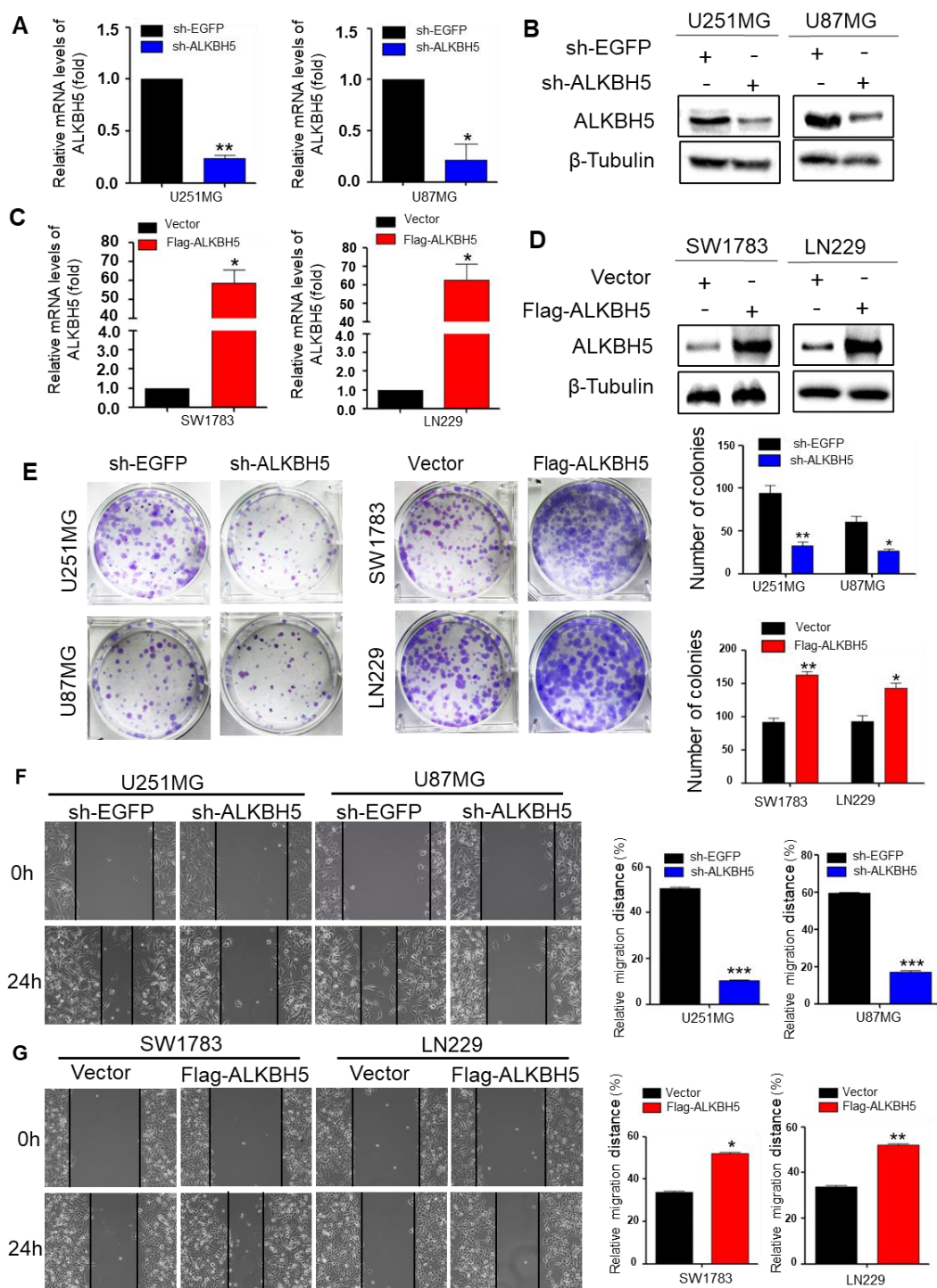


## Supplementary Data

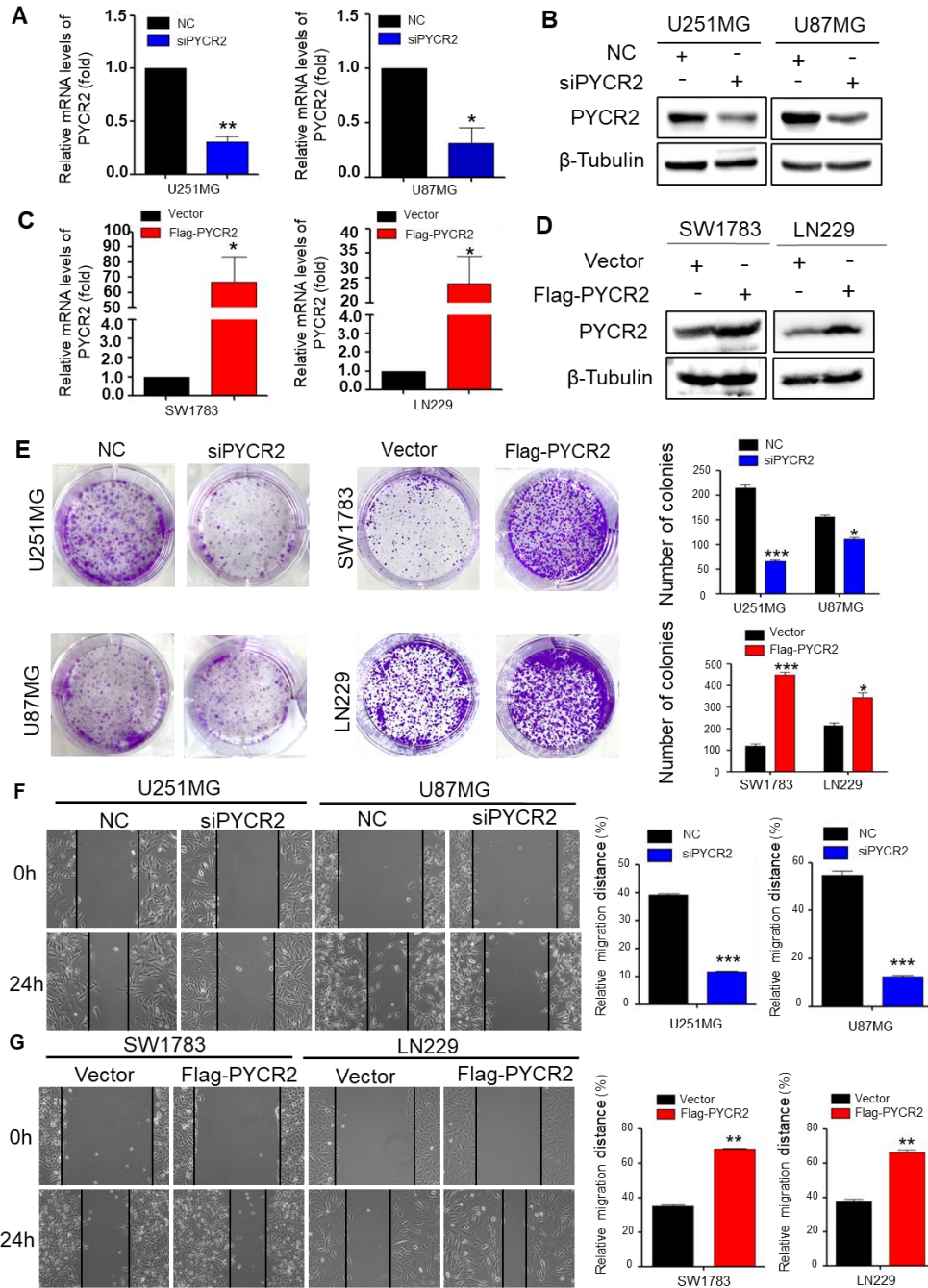
### Figure S1 related to figure 1



**Fig. S1** (A-B) Relative mRNA and protein expression of ALKBH5 in U251MG and U87MG cells transfected with sh-EGFP or sh-ALKBH5 plasmid. (C-D) qRT-PCR and western blot for ALKBH5 expression in SW1783 and LN229 cells transfected with vector or Flag-ALKBH5 plasmid. (E) Colony-forming assay of cells transfected with

indicated plasmids in U251MG, U87MG (with sh-EGFP, sh-ALKBH5) and SW1783, LN229 (with vector, Flag-ALKBH5) cells, and the number of clones were counted. (F-G) GBM cells were transduced with overexpressing or silencing ALKBH5 plasmid and were determined migratory ability by wound healing assay. Data are presented as the mean  $\pm$  SEM. \* $P$ <0.05, \*\* $P$ <0.01, \*\*\* $P$ <0.001.

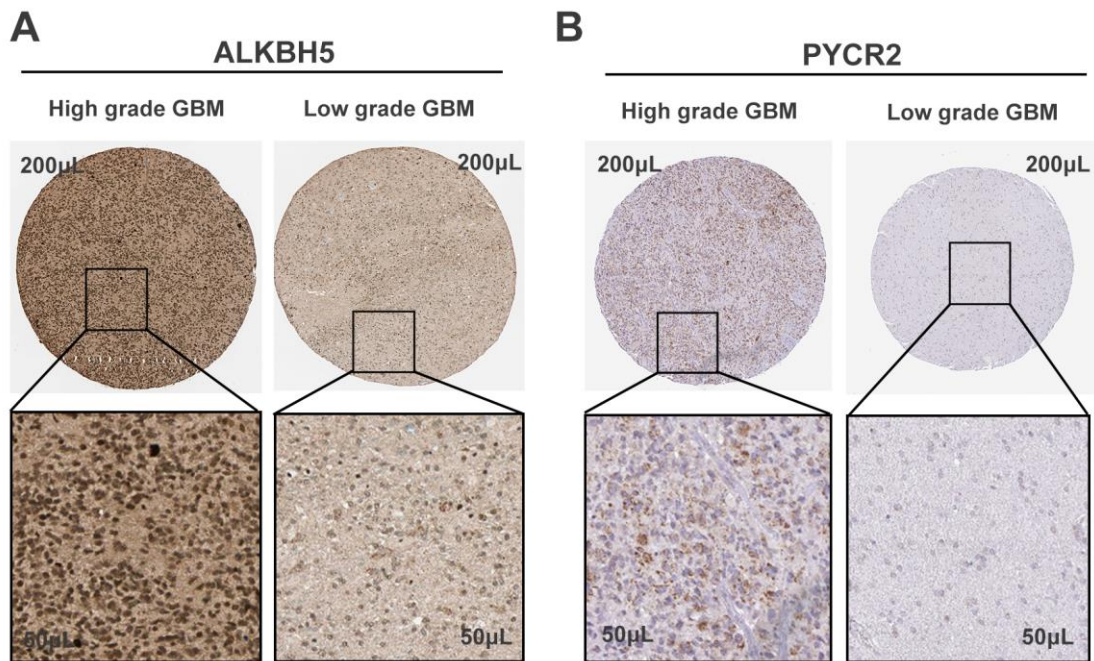
**Figure S2 related to figure 2**

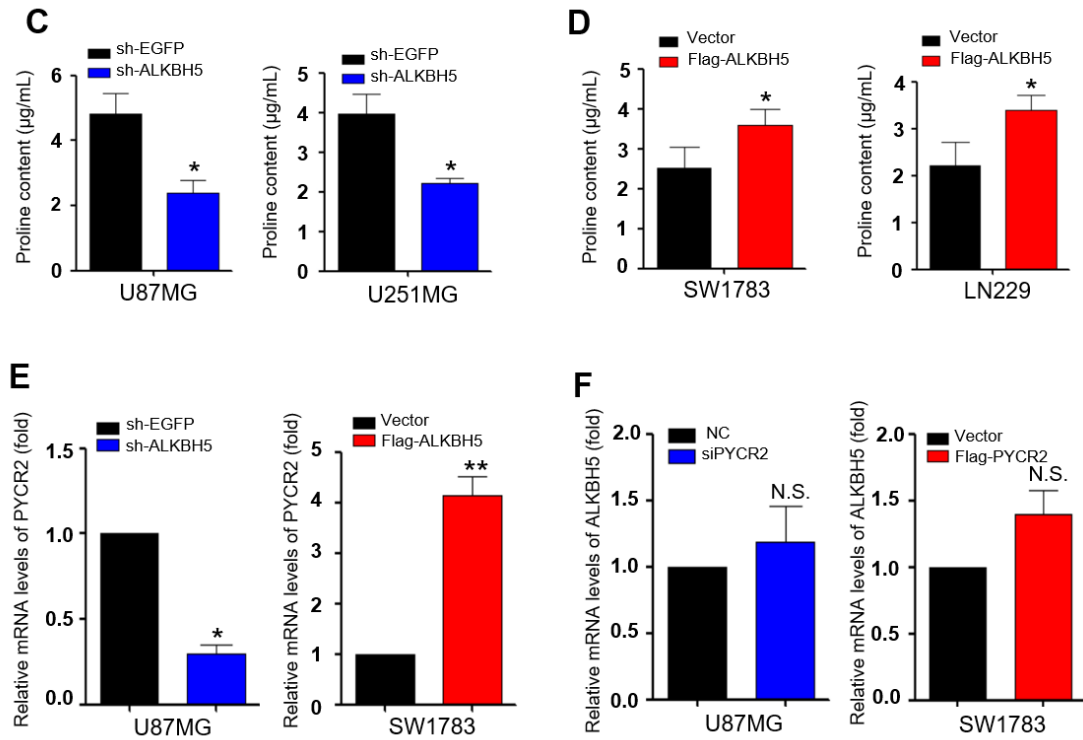


**Fig. S2** (A-B) PYCR2 was depleted by siPYCR2 in the indicated cell lines. Cells were lysed for RT-PCR and Western blot analyses. (C-D) qRT-PCR and western blot for

PYCR2 expression in GBM cells transfected with vector or Flag-PYCR2 plasmid. (E) Colony-forming assay of cells transfected with indicated siRNAs or overexpression plasmids in various GBM cells and counted the number of clones. (F-G) The effect of knockdown or overexpression of PYCR2 on determining the migratory ability in indicated GBM cells was performed by wound healing assay. Data are presented as the mean  $\pm$  SEM. \* $P$ <0.05, \*\* $P$ <0.01, \*\*\* $P$ <0.001

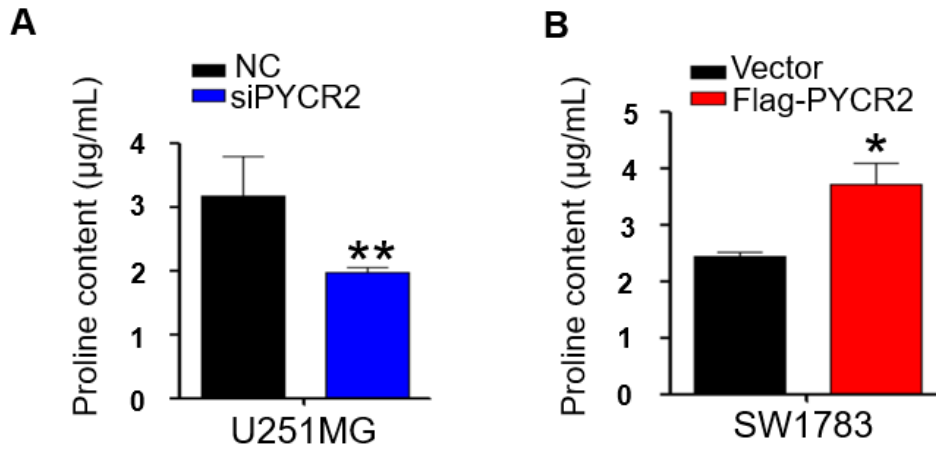
### Figure S3 related to figure 3





**Fig. S3** (A) Immunohistochemical staining for ALKBH5 in high-grade GBM (patient id: 3241) and low-grade GBM (patient id: 3174). (B) Immunohistochemical staining for PYCR2 in high-grade GBM (patient id: 2908) and low-grade GBM (patient id: 2852). (C-D) Proline detection assay for measuring the proline content in silencing or overexpressing ALKBH5 in GBM cells. (E) qRT-PCR was used to detect the mRNA expression of PYCR2 after silencing or overexpressing ALKBH5 in GBM cells. (F) qRT-PCR was used to detect the mRNA expression of ALKBH5 after silencing or overexpressing PYCR2 in GBM cells. Data are presented as the mean  $\pm$  SEM. \* $P$ <0.05, \*\* $P$ <0.01, N.S., not significant.

**Figure S4 related to figure 4**



**Fig. S4 (A-B)** Proline detection assay for measuring the proline content in silencing or overexpressing PYCR2 in GBM cells. Data are presented as the mean  $\pm$  SEM. \* $P$ <0.05, \*\* $P$ <0.01