

## Supplementary figure and figure legends

### **Golgi phosphoprotein 3 promotes Wls recycling and Wnt secretion in glioma progression**

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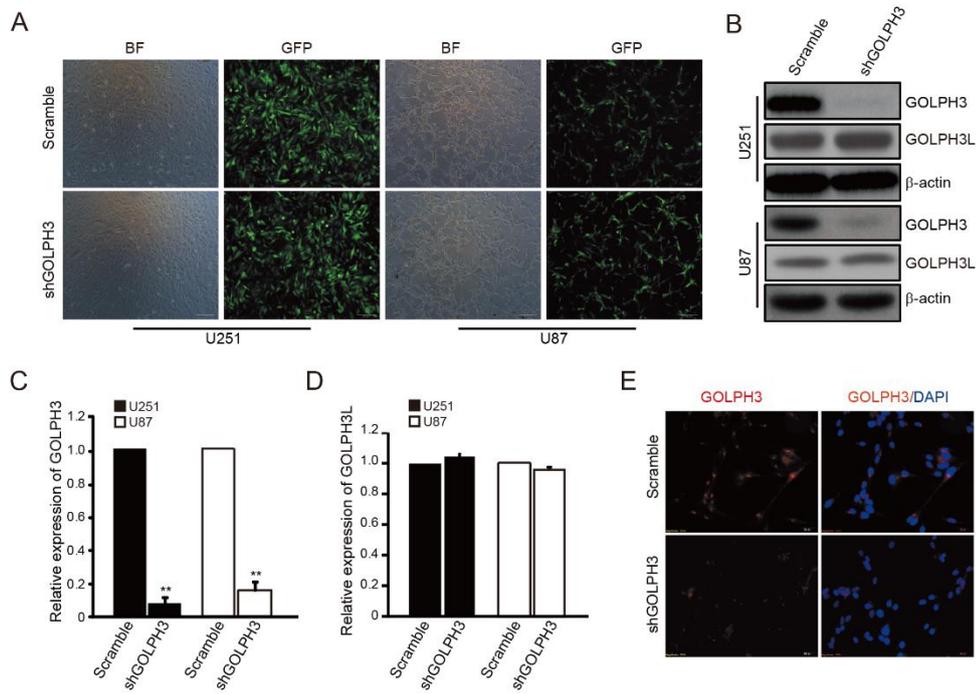
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sFig 1

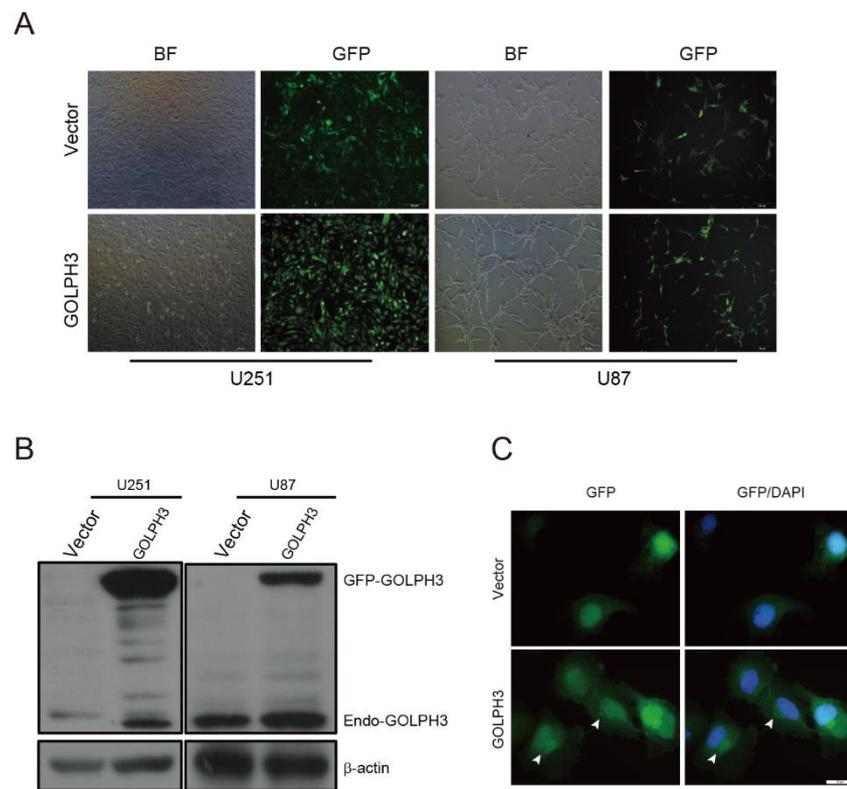


**sFig. 1 Generation of GOLPH3 down-regulation cells.** (A) The infection efficiency of GFP tagged scramble and shGOLPH3 lentivirus in U251 and U87 cells. Scale bar, 100  $\mu$ m. (B) The silencing efficiency and specificity of shGOLPH3 were examined by western blotting. (C&D) Quantitative analysis. (E) shGOLPH3 knocking-down efficiency was detected by immunofluorescence in U87 cells. Scale bar, 20 $\mu$ m.



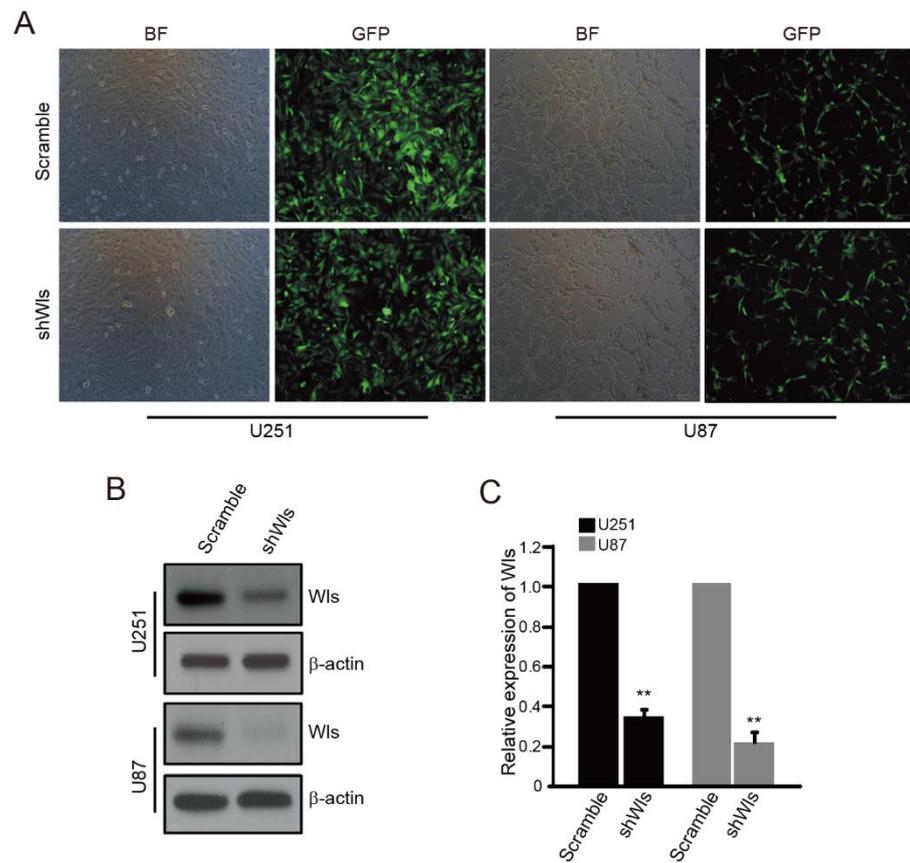
of seeding are shown. Scale bar, 100  $\mu\text{m}$ . Right panel: Bright field (BF) and fluorescent (GFP) images of typical single colonies formed by U251 cells infected with the indicated GFP-tagged lentivirus. **(E&F)** Quantification of the colonies. \* $P < 0.05$ , \*\*  $P < 0.01$ .

sFig 3



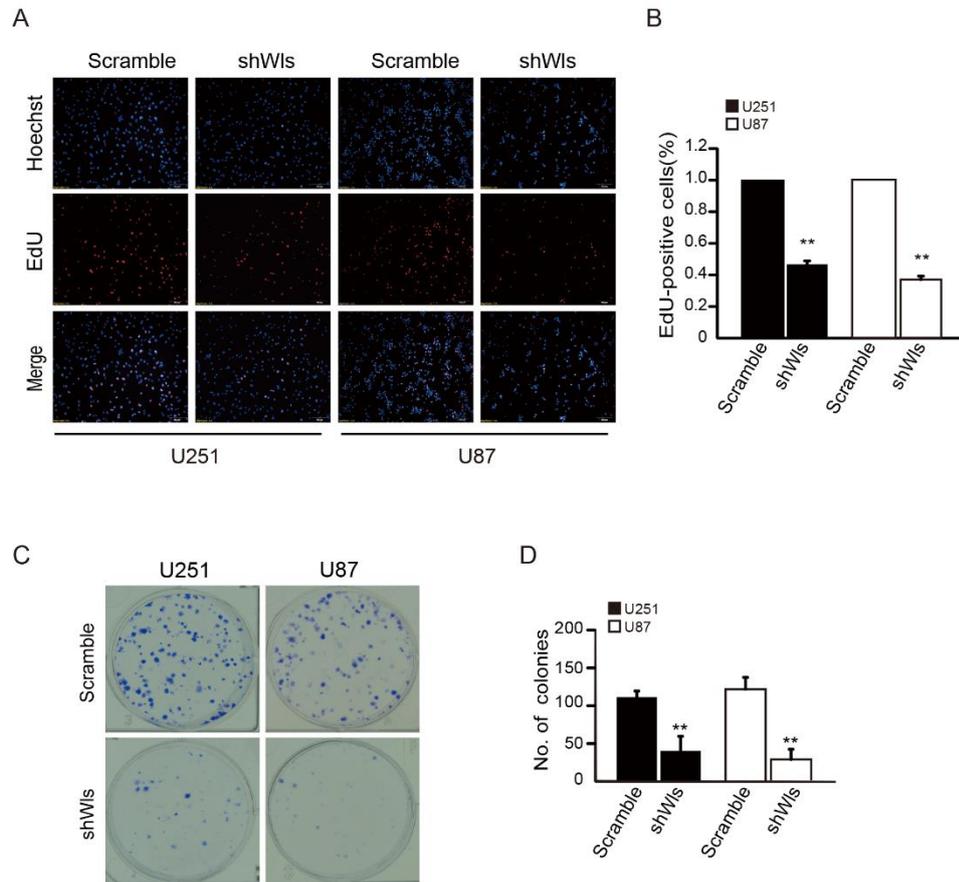
**sFig. 3 Generation of GOLPH3 over-expression cells. (A&B)** The infection efficiency of vector and GOLPH3 lentivirus in U251 and U87 cells. Scale bar, 100  $\mu$ m. **(C)** The location of GFP and GFP-GOLPH3 in U251 cells was shown by immunofluorescence. White arrowheads indicated the GFP-GOLPH3. DAPI indicated the cell nucleus. Scale bar, 10  $\mu$ m. BF: bright field. The lentivirus was GFP tagged.

sFig 4



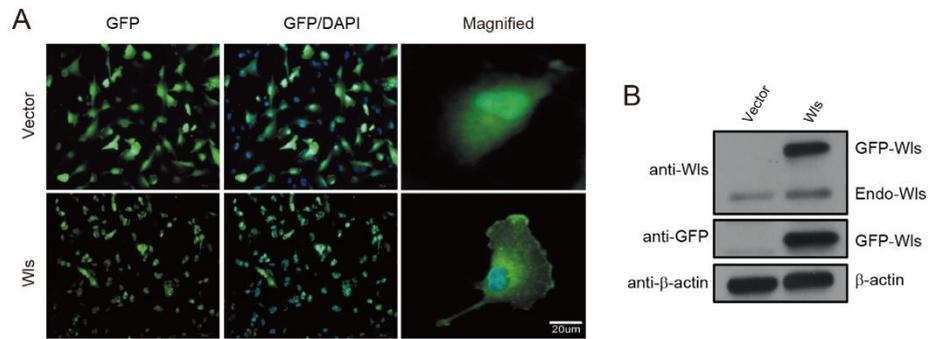
**sFig. 4 Generation of Wls down-regulation cells. (A)** The infection efficiency of GFP tagged scramble and shWls lentivirus in U251 and U87 cells. Scale bar, 100 $\mu$ m. **(B)** The silencing efficiency of shWls was examined by western blotting. **(C)** Quantitative analysis of **(B)**. \*\*  $P < 0.01$ .

sFig 5



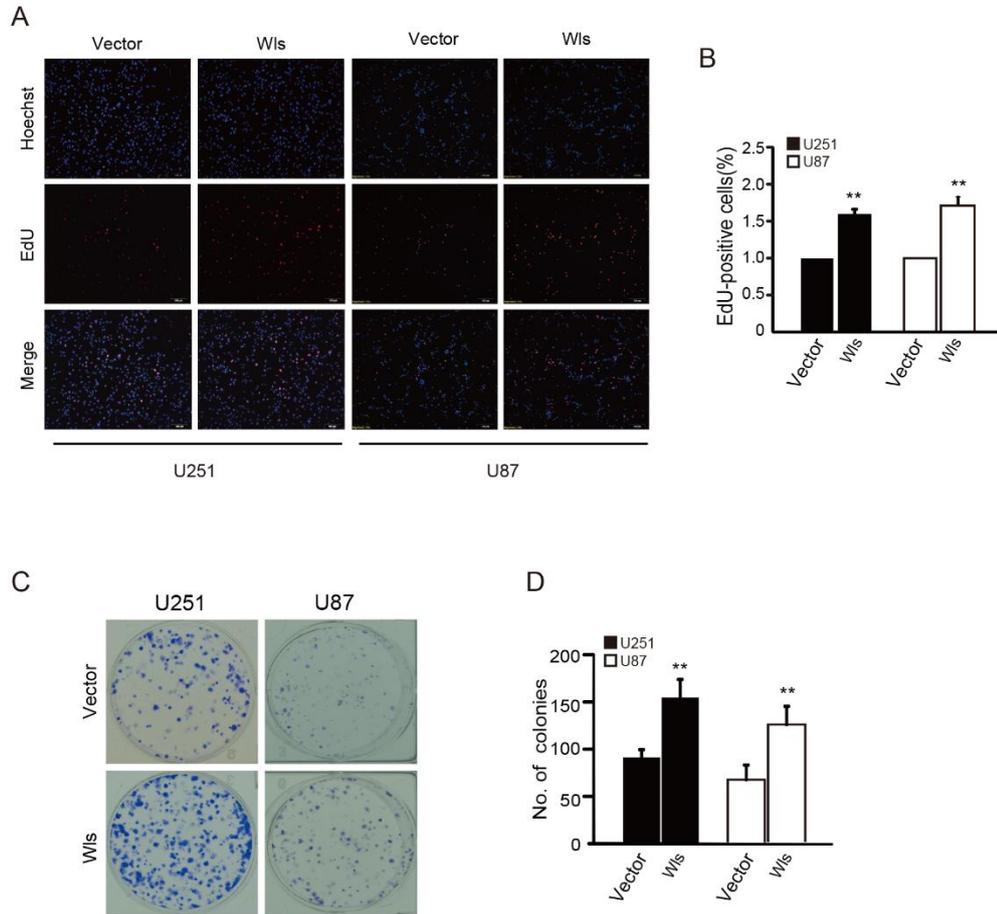
**sFig.5 Wls down-regulation inhibits the proliferation of human glioma cells. (A)** Representative images of EdU incorporation assay after down-regulation of Wls with indicated lentivirus. Scale bar, 100  $\mu$ m. **(B)** Quantification of the EdU positive cells. **(C)** Representative images of colonies infected with indicated lentivirus. Scale bar, 100  $\mu$ m. **(D)** Quantification of the colonies. \* $P < 0.05$ , \*\*  $P < 0.01$ .

sFig 6



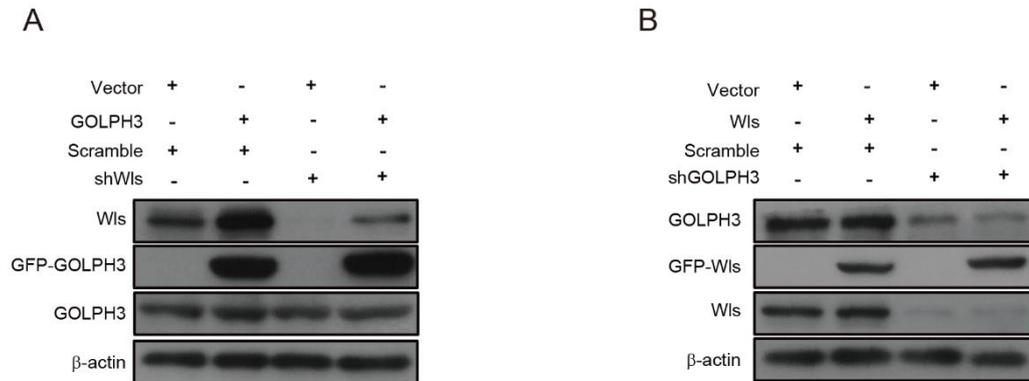
**sFig.6 Over-expression of Wls in glioma cells.** (A) The transfection efficiency of GFP-Wls was shown in U251 cells. Scale bar, 50µm. The Magnified image showed the specific subcellular localization of GFP-Wls. Scale bar, 20µm. (B) The over-expression efficiency of GFP-Wls was examined by western blotting.

sFig 7



**sFig.7 Over-expression of Wls promotes the proliferation of human glioma cells. (A)** Representative images of EdU incorporation assay after over-expression of Wls with indicated lentivirus. Scale bar, 100  $\mu$ m. **(B)** Quantification of the EdU positive cells. **(C)** Representative images of colonies infected with indicated lentivirus. Scale bar, 100  $\mu$ m. **(D)** Quantification of the colonies. \* $P$ <0.05, \*\*  $P$ <0.01.

sFig 8

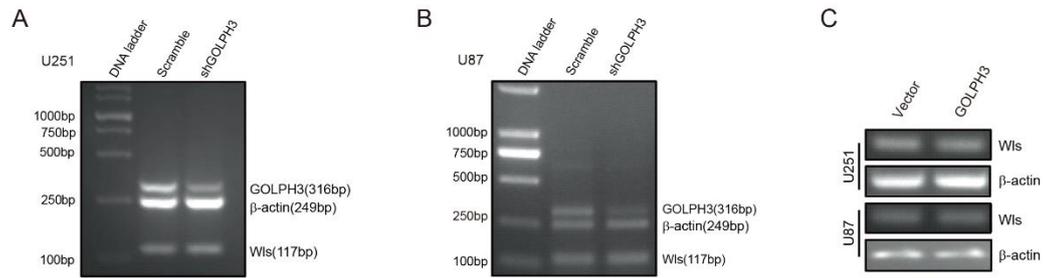


**sFig.8 Co-infection of shWls and GOLPH3 or Wls and shGOLPH3 in U251 cells. (A)**

Representative blots showed the co-infection of GOLPH3 and shWls lentivirus in U251 cells.

**(B)** Representative blots showed the transfection of GFP-Wls in shGOLPH3 glioma cells.

sFig 9



**sFig.9 GOLPH3 does not affect the Wls mRNA level. (A&B)** GOLPH3 knocking down did not affect the mRNA level of Wls in U251 and U87 cells. **(C)** GOLPH3 over-expression did not affect the mRNA level of Wls in U251 and U87 cells.