Figure S1. shRNA-mediated knockdown of FGGY suppresses CRC cell viability. (A) Endogenous expression of FGGY at both mRNA and protein levels in a panel of CRC cell lines was determined using quantitative PCR and western blotting. HCT116 cells were transduced with lentiviruses encoding one of three anti-FGGY shRNAs or sh-Ctrl. Levels of FGGY (B) mRNA and (C) protein were determined using quantitative PCR or western blotting. GAPDH was used as an internal control. Band intensities were semi-quantified using ImageLab software. (D) Viability of HCT116 cells after transduction with lentiviruses encoding one of three anti-FGGY shRNAs or sh-Ctrl, as determined by Cell Counting Kit-8 assay. Data are normalized to viability on day 1 and are represented as fold changes. *P<0.05 vs. sh-Ctrl. CRC, colorectal cancer; Ctrl, control; FGGY, FGGY carbohydrate kinase domain containing; sh, short hairpin.

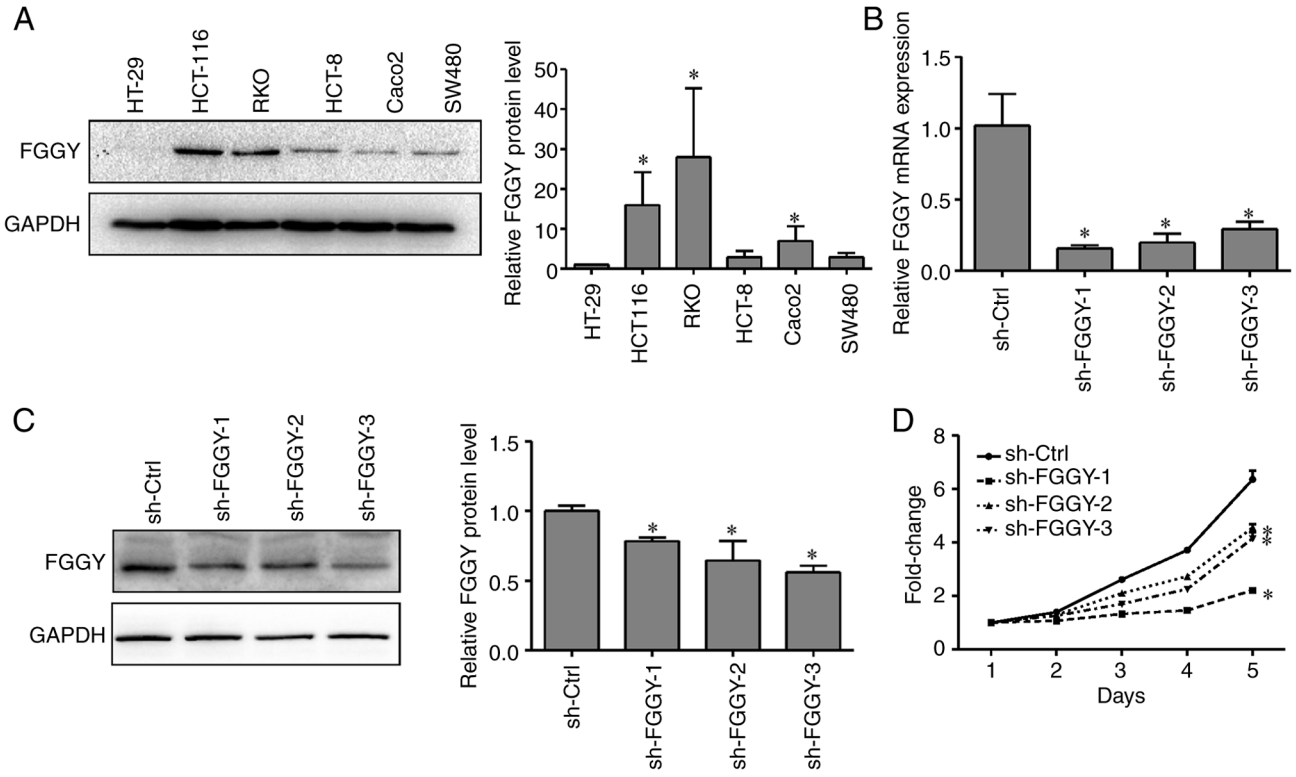

Figure S2. FGGY knockdown downregulated Bcl-2 and upregulated Bax protein levels in colorectal cancer cells. The protein levels of Bcl-2 and Bax in HCT116 cells after transduction with sh-FGGY or sh-Ctrl was assessed by western blotting. GAPDH was used as a loading control. Band intensities were semi-quantified using ImageLab software. *P<0.05 vs. sh-Ctrl. Ctrl, control; FGGY, FGGY carbohydrate kinase domain containing; sh, short hairpin.

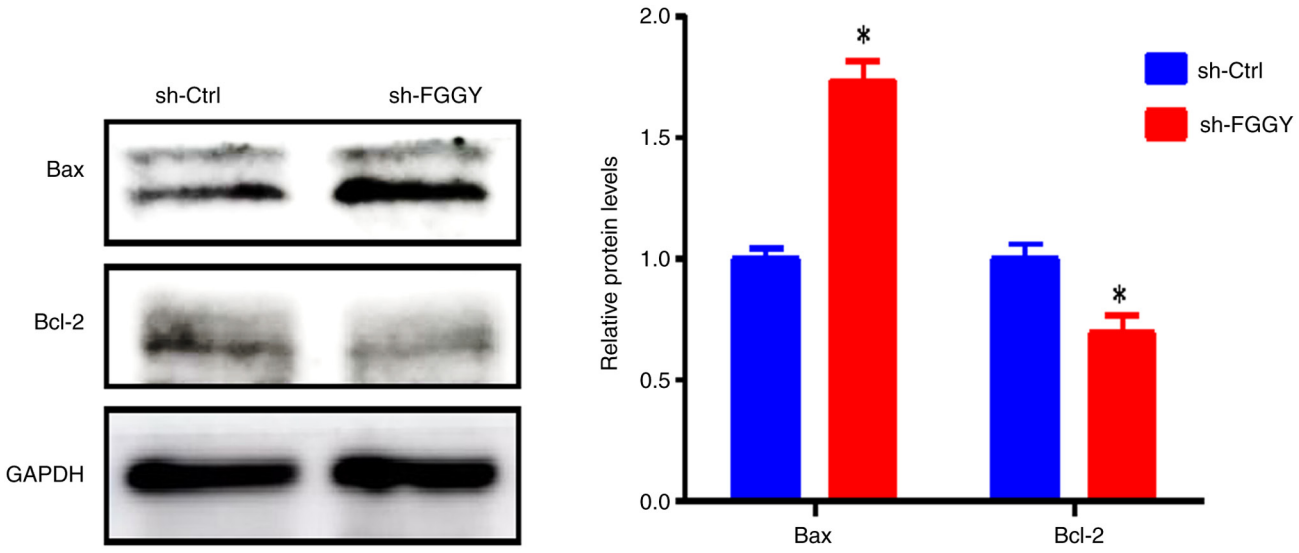

Figure S3. FGGY overexpression increases CRC cell viability, and inhibits cell senescence and the p53 pathway. (A) Protein levels of FGGY in HT-29 cells after transduction of a lentivirus encoding FGGY or a control plasmid were assessed by western blotting. GAPDH was used as a loading control. Band intensities were semi-quantified using ImageLab software. (B) Viability of HT-29 cells after FGGY overexpression was determined by Cell Counting Kit-8 assay. Data are normalized to viability on day 1. A xenograft nude mouse model was established to investigate the growth of HT-29 tumor cells in vivo. (C) Tumor volumes, (D) fluorescence intensity of tumor cells, and (E) images of tumor and tumor weights were determined. (F) Protein levels of p53 and p21 in HT-29 cells after FGGY overexpression were assessed by western blotting. GAPDH was used as a loading control. Band intensities were semi-quantified using ImageLab software. (G) Senescence-associated β-gal staining in HT-29 cells after FGGY overexpression. Representative images were taken at a magnification of x200. *P<0.05 vs. control. β-gal, β-galactosidase; FGGY, FGGY carbohydrate kinase domain containing.