



**Fig. S4  $\beta$ -catenin promotes USP1 transcription in GBM.**

**(A)** Correlation of mRNA expression between USP1 and CTNNB1/TCF4 from the TCGA GBM dataset (n=356). **(B)** The correlation of mRNA levels between USP1 and CTNNB1 in different GBM subtypes from the TCGA dataset. In both (A) and (B), data were generated from Project Betastasis platform ([www.betastasis.com](http://www.betastasis.com)) using “TCGA-Glioblastoma Two-gene scatterplot Affymetrix Human Exon 1.0 ST” dataset. **(C)** GSC11 cells were transfected with two independent  $\beta$ -catenin siRNAs, and USP1 mRNA expression was examined by qRT-PCR. **(D)** The mRNA levels of USP1 in  $\beta$ -Cat<sup>-/-</sup> and  $\beta$ -Cat<sup>+/+</sup> MEFs were detected by qRT-PCR. In (C) and (D), data were mean  $\pm$  s.d. of n=3 independent experiments, Student’s t-test, \*P<0.05. **(E)**  $\beta$ -Cat<sup>-/-</sup> and  $\beta$ -Cat<sup>+/+</sup> MEFs were transfected with Pro-L or Pro-S plasmid. **(F)**  $\beta$ -Cat<sup>-/-</sup> and  $\beta$ -Cat<sup>+/+</sup> MEFs were transfected with wild-type Pro-L plasmid (WT) or TCF4 binding site mutant Pro-L plasmid (Mut). In (E) and (F), reporter gene activities were measured by dual luciferase assays. Renilla luciferase (pRL-TK) was used as an internal control. Data were mean  $\pm$  s.e.m., n=3 independent experiments, Student’s t-test. \*\*P<0.01. **(G)**  $\beta$ -Cat<sup>-/-</sup> MEFs were transfected with MYC-USP1, and the cell lysates were analyzed by immunoblotting using the indicated antibodies.