



Supplementary Figure 1. **A** The protein expression of USP51 in SW480, HCT116, DLD-1 and LoVo cells under normoxia. **B** USP51 was overexpressed in SW480 cells under normoxia or hypoxia. Cell lysates were blotted by the indicated antibodies. **C, D** USP51 was overexpressed in SW480 cells under normoxia (**C**) or hypoxia (**D**). The relative mRNA level of the indicated genes was analyzed. **E** SW480 cells with either HIF1A or USP51 knockdown were used to establish xenograft models. The illustration depicts representative images and result of the immunohistochemistry staining of USP51, HIF1A and CD31. **F** Flag-USP51 or Flag-USP51/CI plasmids were transfected into HCT116 cells. Cell lysates were blotted by the anti-HIF1A and anti-USP51 antibodies. **G** Flag-USP51 or Flag-USP51/CI were overexpressed in SW480 cells. Cell lysates were prepared for immunoprecipitation with anti-HIF1A antibody, and blotted by anti-ub antibody. **H** USP51 was stably knocked down in DLD-1 cells. Cell lysates were prepared for immunoprecipitation with anti-HIF1A antibody, and blotted by anti-ub antibody. Data are expressed as mean \pm SD, n=3 biological replicates in C, D, n=5 biological replicates in E. ns: not significant. WCL: Whole cell lysate, Nuc: nuclear fraction.