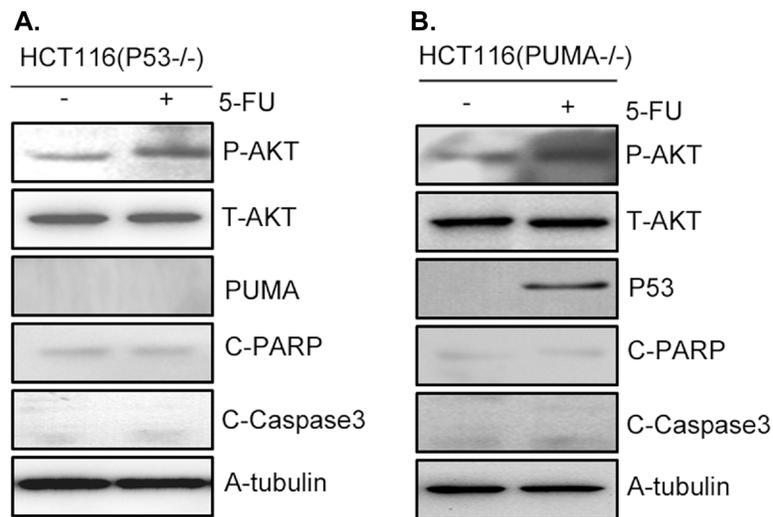
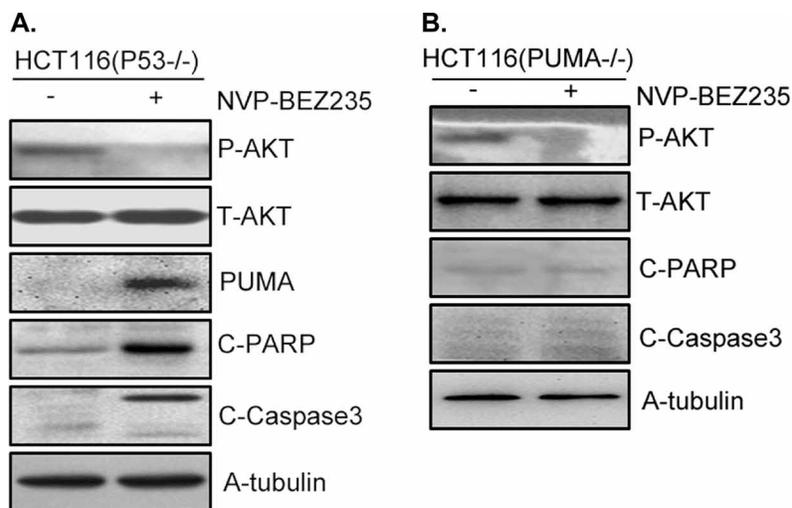


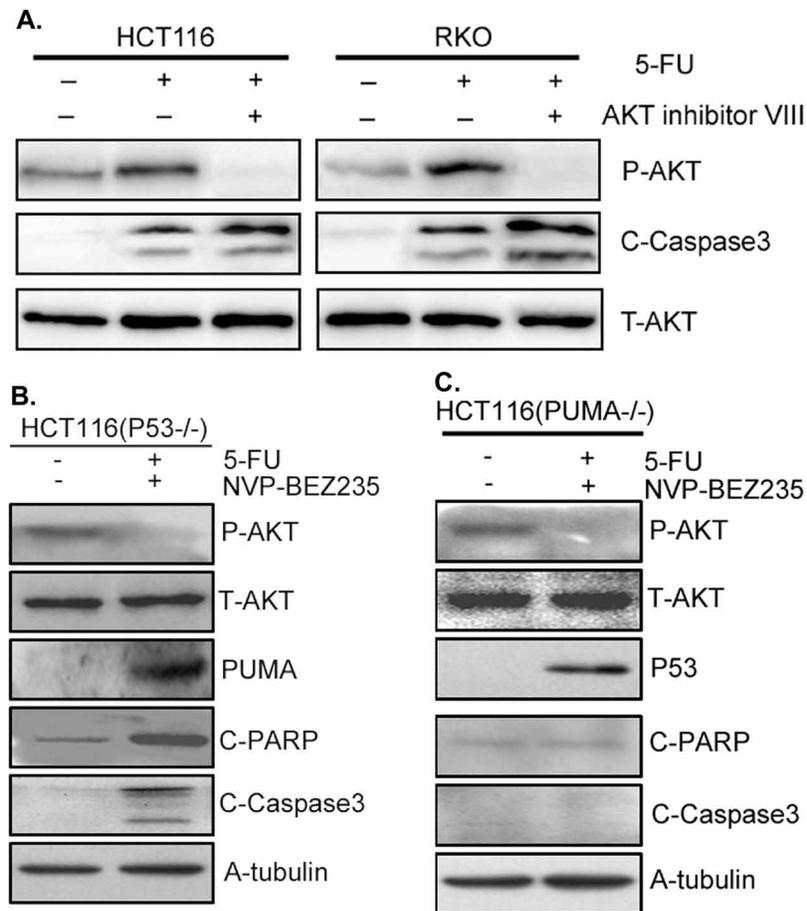
## SUPPLEMENTARY FIGURES



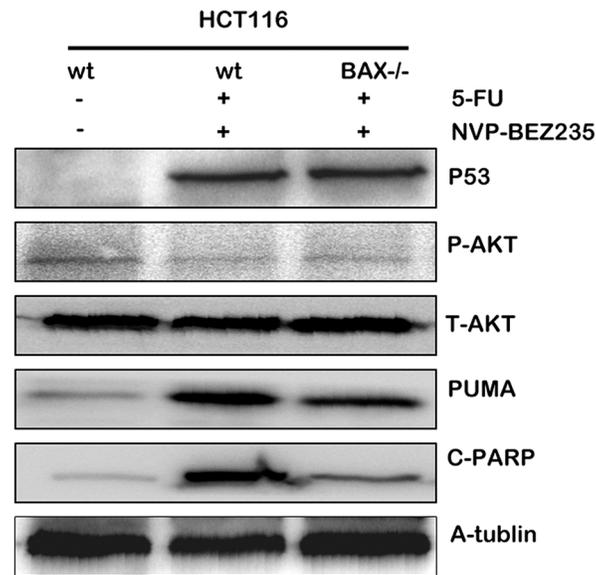
**Supplementary Figure S1: 5-FU induces cell apoptosis in p53<sup>-/-</sup> or PUMA<sup>-/-</sup> HCT-116 cells.** A. and B. Cells were treated with 200  $\mu$ M 5-FU for 12 hours, then P-Akt(S473), p53, PUMA, cleaved PARP and Caspase3 were detected in (A) p53<sup>-/-</sup> HCT-116 cells and (B) PUMA<sup>-/-</sup> HCT-116 cells. Similar results were obtained from three independent experiments.



**Supplementary Figure S2: NVP-BEZ235 induces cell apoptosis in p53<sup>-/-</sup> or PUMA<sup>-/-</sup> HCT-116 cells.** A. and B. Cells were treated with 400 nM NVP-BEZ235 for 12 hours, then P-Akt(S473), PUMA, cleaved PARP and Caspase3 were detected in (A) p53<sup>-/-</sup> HCT-116 cells and (B) PUMA<sup>-/-</sup> HCT-116 cells. Similar results were obtained from three independent experiments.



**Supplementary Figure S3: Combination treatment induces cell apoptosis in HCT-116 and RKO cells.** **A.** P-Akt(S473) and cleaved Caspase3 were detected in HCT-116 and RKO cells after the treatment of 200  $\mu$ M 5-FU, or the combination of 200  $\mu$ M 5-FU and 5  $\mu$ M Akt inhibitor VIII. **B.** and **C.** Cells were treated with the combination of 200  $\mu$ M 5-FU and 400 nM NVP-BEZ235 for 12 hours, then P-Akt(S473), p53, PUMA, cleaved PARP and Caspase3 were detected in (B) p53<sup>-/-</sup> HCT-116 cells and (C) PUMA<sup>-/-</sup> HCT-116 cells. Similar results were obtained from three independent experiments.



**Supplementary Figure S4: Combination treatment induces cell apoptosis in wild-type and Bax<sup>-/-</sup> HCT-116 cells.** P-Akt(S473), p53, PUMA and cleaved PARP were detected in wild-type and Bax<sup>+</sup> HCT-116 cells after combination treatment of 200  $\mu$ M 5-FU and 400nM NVP-BEZ235 for 12 hours. Similar results were obtained from three independent experiments.