



**Supplementary Information for**  
AR-negative prostate cancer is vulnerable to loss of JMJD1C  
demethylase

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**This PDF file includes:**

Figures S1 to S4

**Other supplementary materials for this manuscript include the following:**

Tables S1 and S2

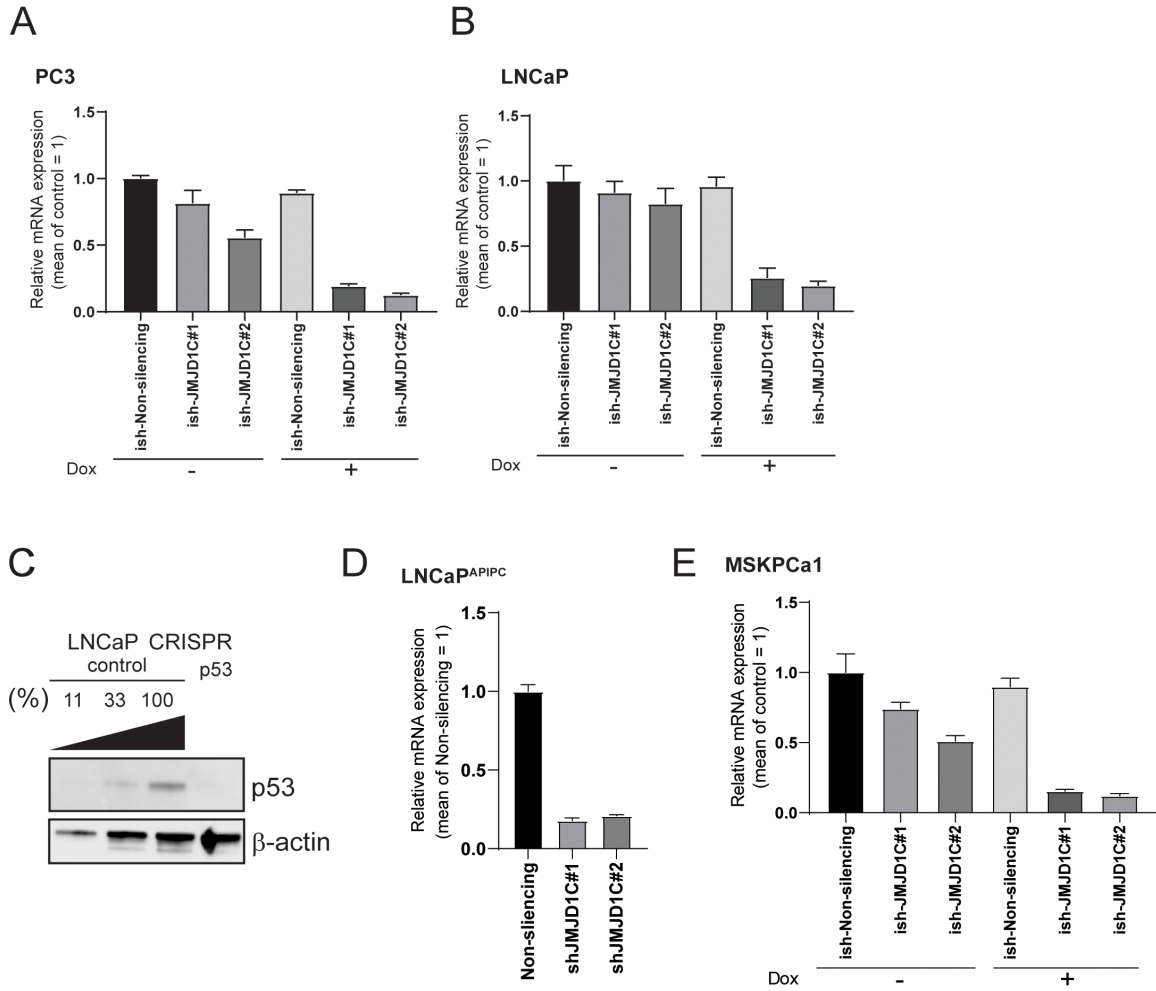
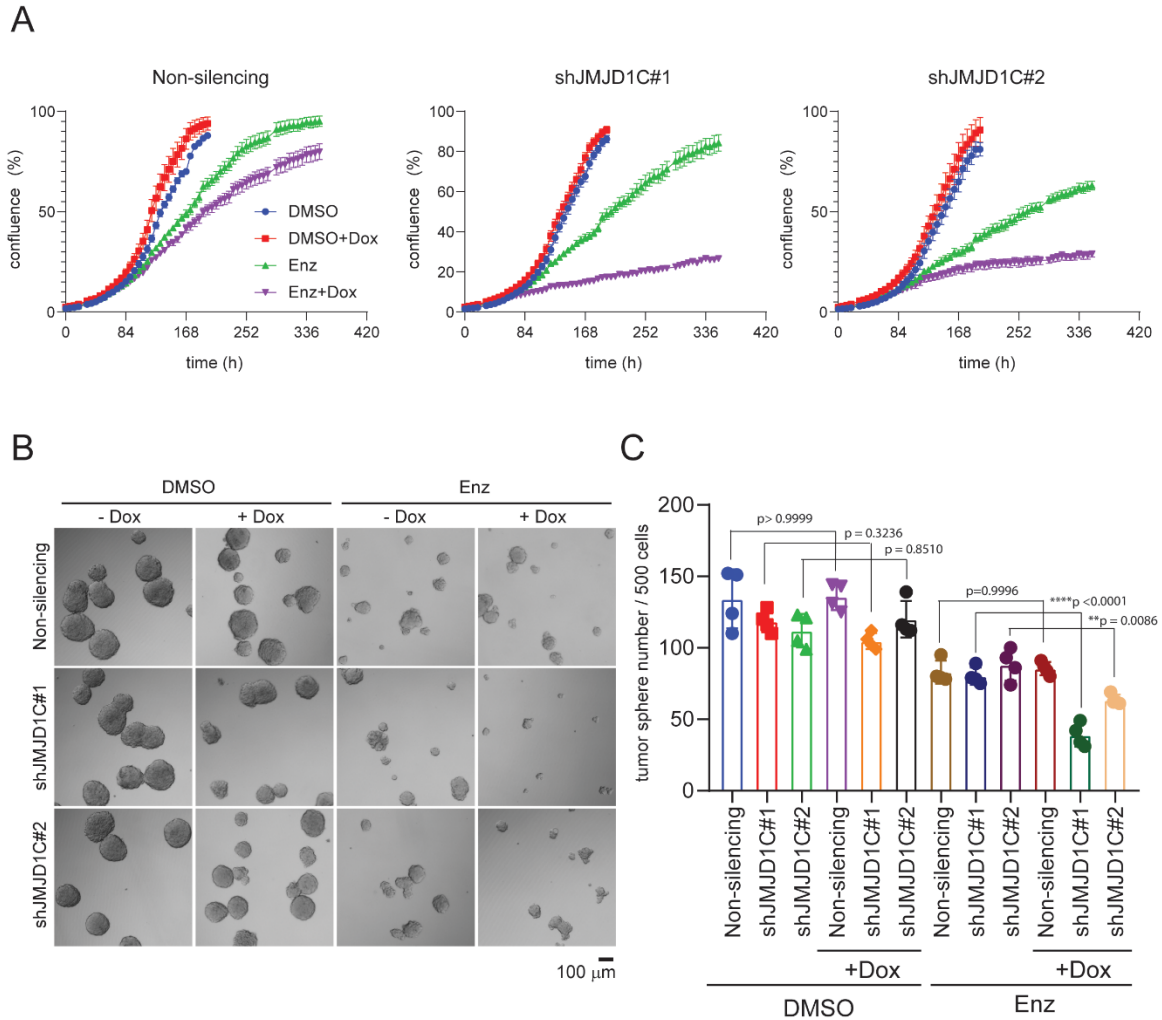
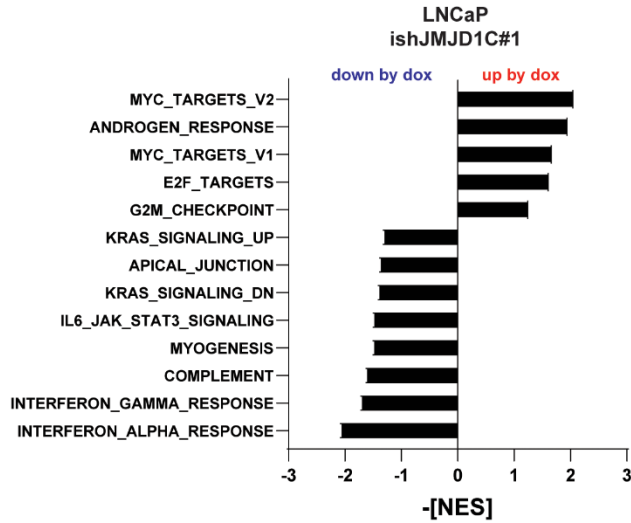


Fig. S1. **Knockdown efficiency of JMJD1C in growth assays.** (A and B) Knockdown efficiency of JMJD1C mRNA in PC3 (A) and LNCaP (B). (C) Establishment of TP53 knockout LNCaP. (D) Knockdown efficiency of JMJD1C mRNA in LNCaP<sup>APIPC</sup>. (E) Knockdown efficiency of JMJD1C in MSKPCa1 prostate cancer organoid.



**Fig. S2. Enzalutamide sensitized LNCaP cells to JMJD1C depletion.** (A) Growth curves of dox-inducible shRNA expressing LNCaP treated with DMSO or 10  $\mu$ M enzalutamide (Enz) are shown. The mean and SEM are indicated.  $n = 4$  biological replicates. Dox: doxycycline (B and C) Representative images (B) and quantifications of tumor spheres (C) of dox-inducible shRNA expressing LNCaP treated with DMSO or 10  $\mu$ M enzalutamide (Enz) as indicated. Scale bar = 100  $\mu$ m. Error bars, mean + SD.

A



B

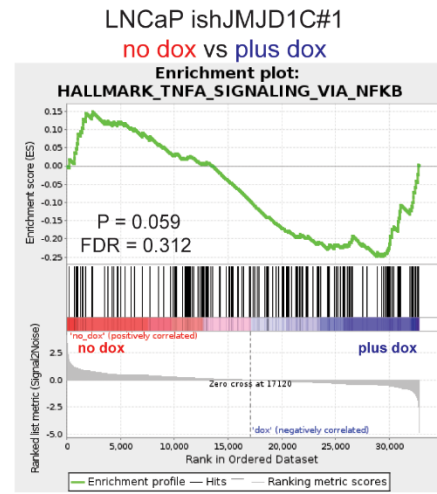
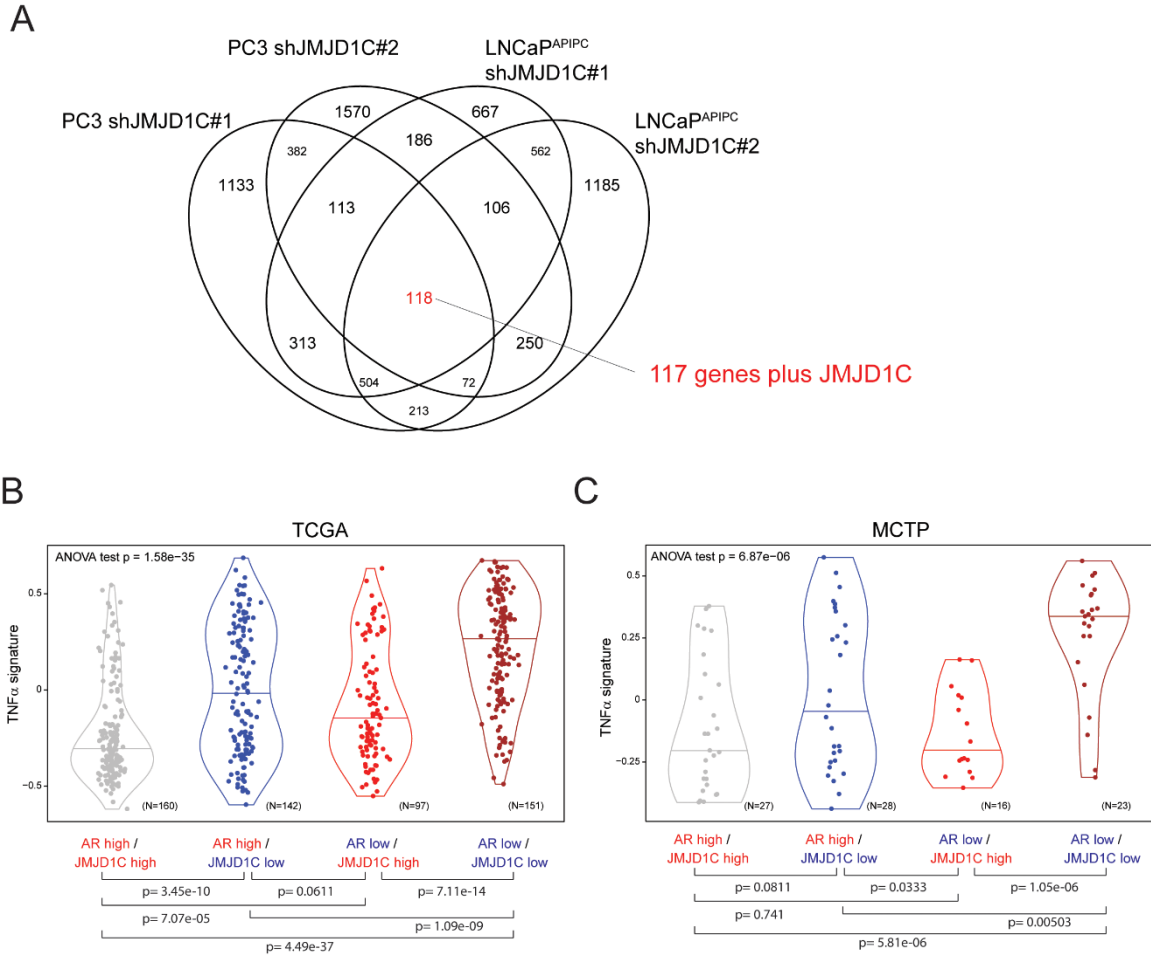


Fig. S3. **GSEA analysis for JMJD1C depleted AR-positive LNCaP cells.** (A) GSEA analysis (Hallmark) showing enriched signatures by JMJD1C knockdown in LNCaP (doxycycline treatment 7 days). Signatures with  $P < 0.05$  and FDR q-value  $< 0.25$  are shown. (B) Enrichment plot showing Hallmark TNF $\alpha$  signaling via NF $\kappa$ B by JMJD1C knockdown in LNCaP.



**Fig. S4. Correlation of JMJD1C signature and TNF $\alpha$  signature.** (A) The Venn diagram showing commonly downregulated genes by JMJD1C-depletion in PC3 and AR negative LNCaP cells (LNCaP<sup>APIPC</sup>). (B and C) TNF $\alpha$  signature calculated with GSEA for prostate cancer patients with high (> 0) or low (< 0) AR or JMJD1C signature in TCGA (B) and MCTP (C) data set.

Table S1 (separate file). List of BF and fraction essentiality plotted in Figure 1 A.

Table S2 (separate file). List of genes downregulated by JMJD1C depletion in PC3 and LNCaP<sup>APIPC</sup> cells.