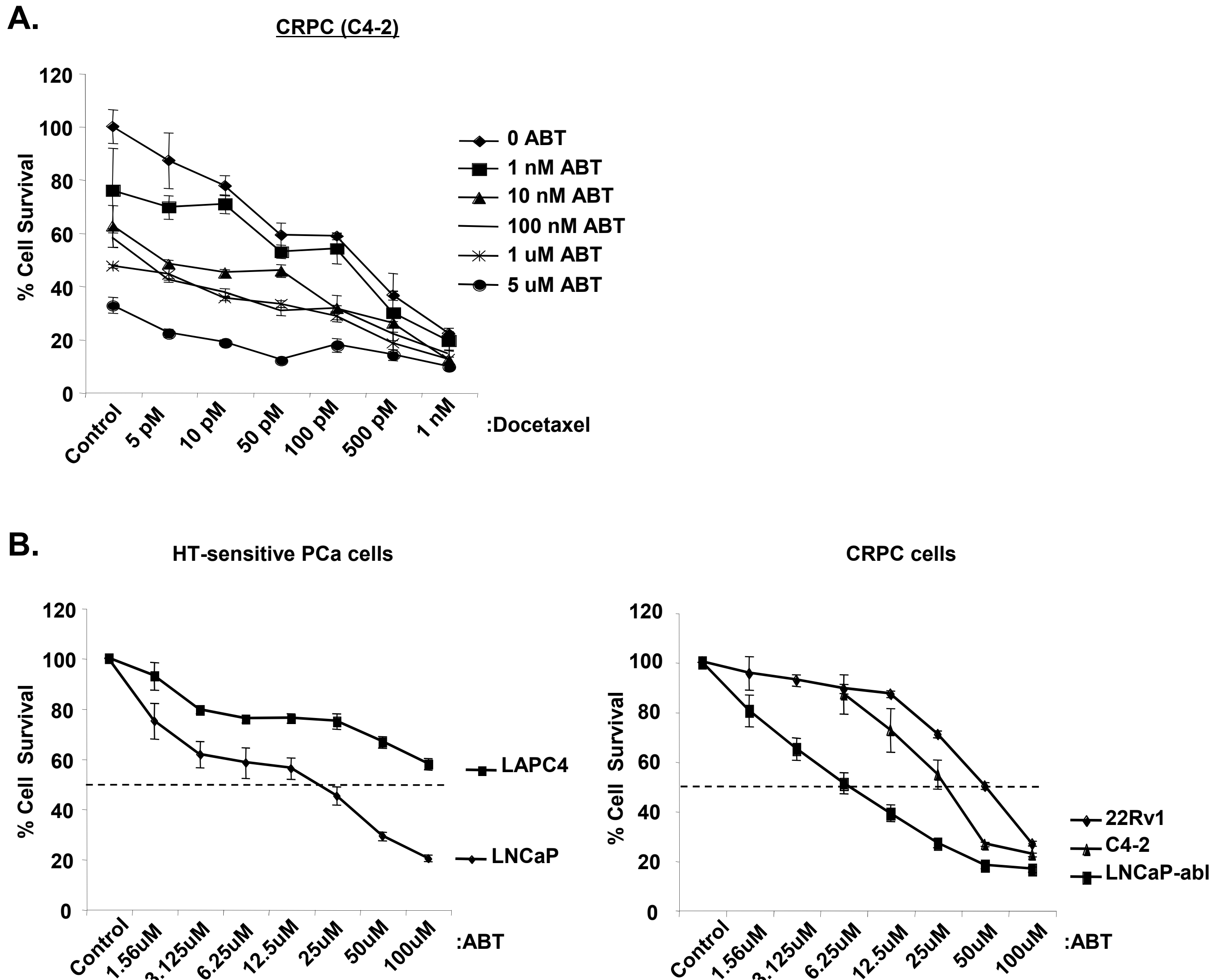
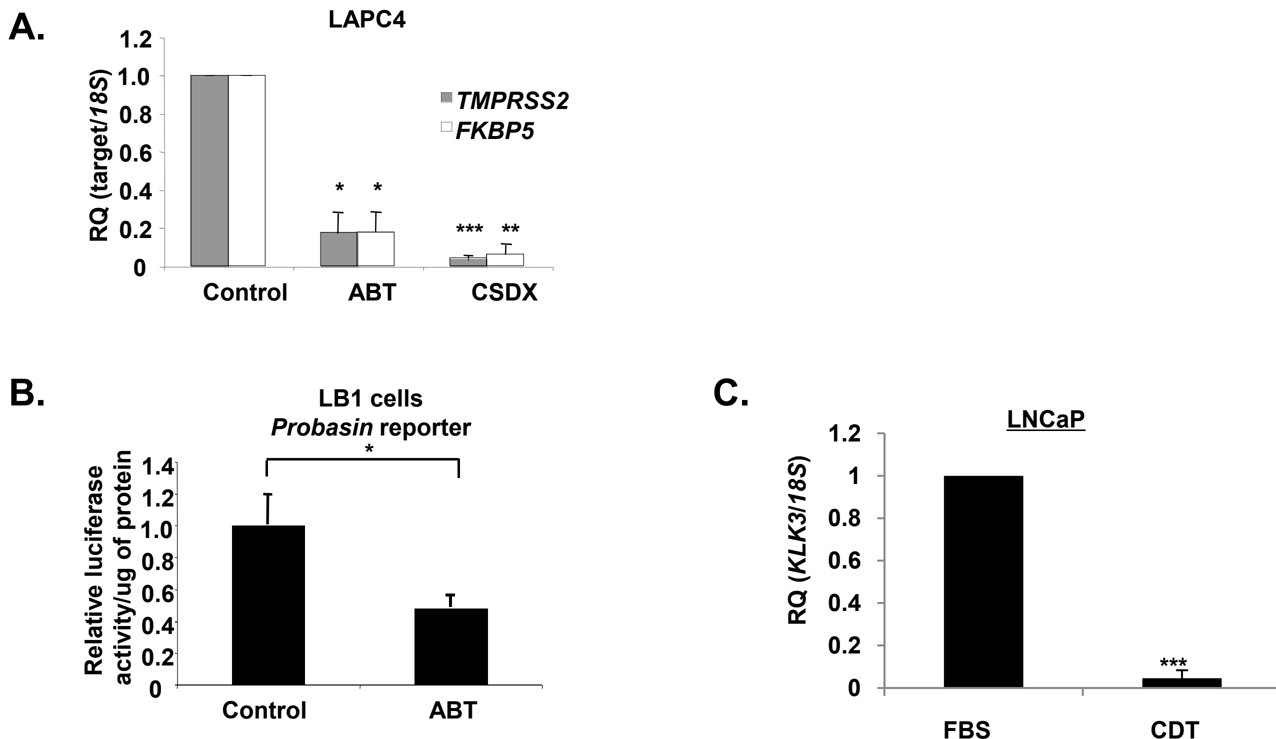
Supplemental Figure S1



Supplemental Figure 1
(A) Cell number in the C4-2 model system was assessed 7 days after exposure to escalating doses of ABT888 and docetaxel in combination as depicted. Data reflect average and standard deviation of at least three independent experiments, each performed with biological triplicates. Vehicle control is set to “100”. (B) Indicated model systems were administered escalating doses of ABT888. Cell viability was assessed as described in the supplemental materials and methods section. Data reflect the average and standard deviation of at least three independent experiments in technical triplicate. Vehicle control is set to “100”.

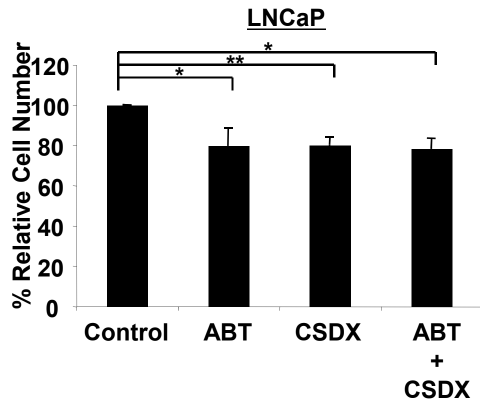
Supplemental Figure S2



Supplemental Figure 2

(A) LAPC4 cells were cultured in media containing complete serum, treated for 24h with either control or ABT888 (2.5uM). Cells were harvested, and qPCR analyses for indicated AR target genes were performed. Data reflect average and standard error of at least three independent experiments, each performed with technical triplicates. Results were normalized to *18S* and control is set to "1". (B) LB1 cells (supplemental reference 5) , which contain an integrated reporter gene which puts firefly luciferase under the control of AR via probasin gene control elements, were were cultured in media containing complete serum, treated for 24h with either control or ABT888 (2.5uM), harvested, lysed, and relative luciferase activity per ug of total protein was determined. Control treated cells are set to "1". Data shown reflects the mean of at least nine independent biological replicates ±SE. (C) LNCaP cells were cultured in media containing complete serum (FBS) or steroid-deprived for 72h (CDT). Cells were harvested, and qPCR analyses for indicated AR target genes were performed. Data reflect average and standard error of at least three independent experiments, each performed with technical triplicates. Results were normalized to *18S* and control is set to "1". Statistical significance was determined using Student's *t* test. *=$p<0.05$, **=$p<0.01$, and ***=$p<0.001$

Supplemental Figure S3

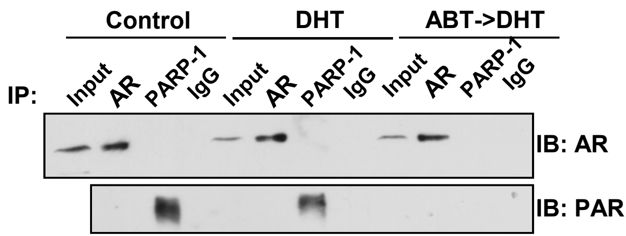


Supplemental Figure 3

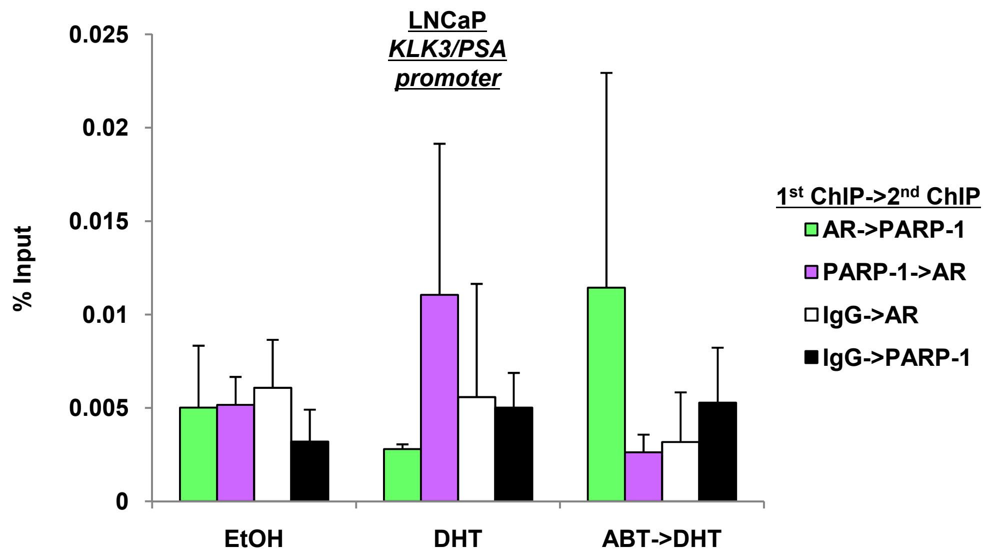
LNCaP cells were cultured in media containing complete serum, treated for 24h with either ethanol control (0.01%), ABT888 (2.5uM), Casodex (1uM) or ABT888 + Casodex (1.25uM and 0.5uM, repesectively). Cell number was assessed 96h later via trypan blue exclusion and a hemocytometer. Data reflect average and standard deviation of at least three independent experiments, each performed with biological triplicates. Vehicle control is set to “100”. Statistical significance was determined using Student’s *t* test. *=p<0.05, **=p<0.01, and ***=p<0.001

Supplemental Figure S4

A.



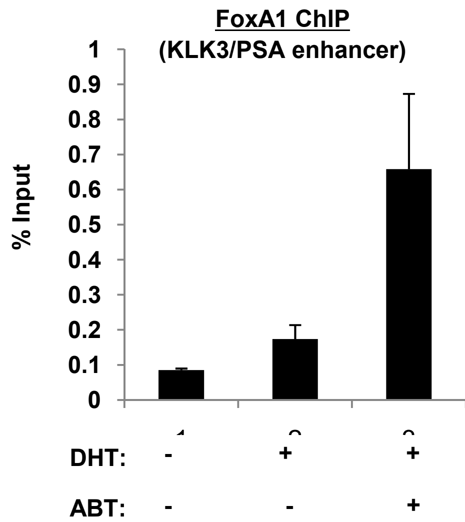
B.



Supplemental Figure 4

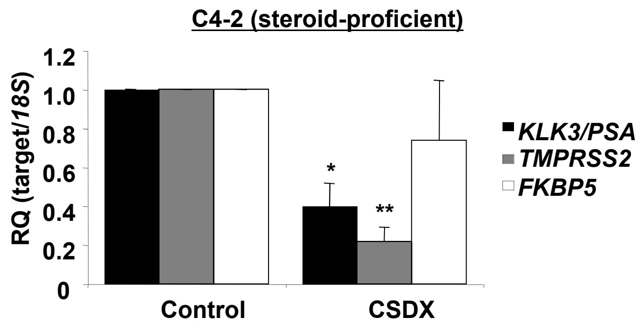
(A) LNCaP cells were steroid-deprived for 72h, pretreated with either control or ABT888 (2.5uM), then treated with either EtOH or DHT (1nM). Cells were then harvested, lysed in NETN, and immunoprecipitation (IP) and immunoblot (IB) was performed for the indicated proteins. Image is representative of at least three independent experiments. (B) LNCaP cells were steroid-deprived for 72h, pretreated for 30m with vehicle or ABT888 (2.5uM), then stimulated with DHT (10nM, 1h) or ethanol control. Cells were fixed, lysed, and chromatin immunoprecipitation (ChIP) for AR, PARP-1, and IgG control. Bound DNA was eluted and subjected to a second round of ChIP as indicated. DNA was purified from immunoprecipitates (IPs) and utilized in qPCR reactions for indicated genomic loci. Data is representative of at least three independent experiments, each performed with technical triplicates, and depicted as the average of immunoprecipitated signal to input signal and standard deviation.

Supplemental Figure S5



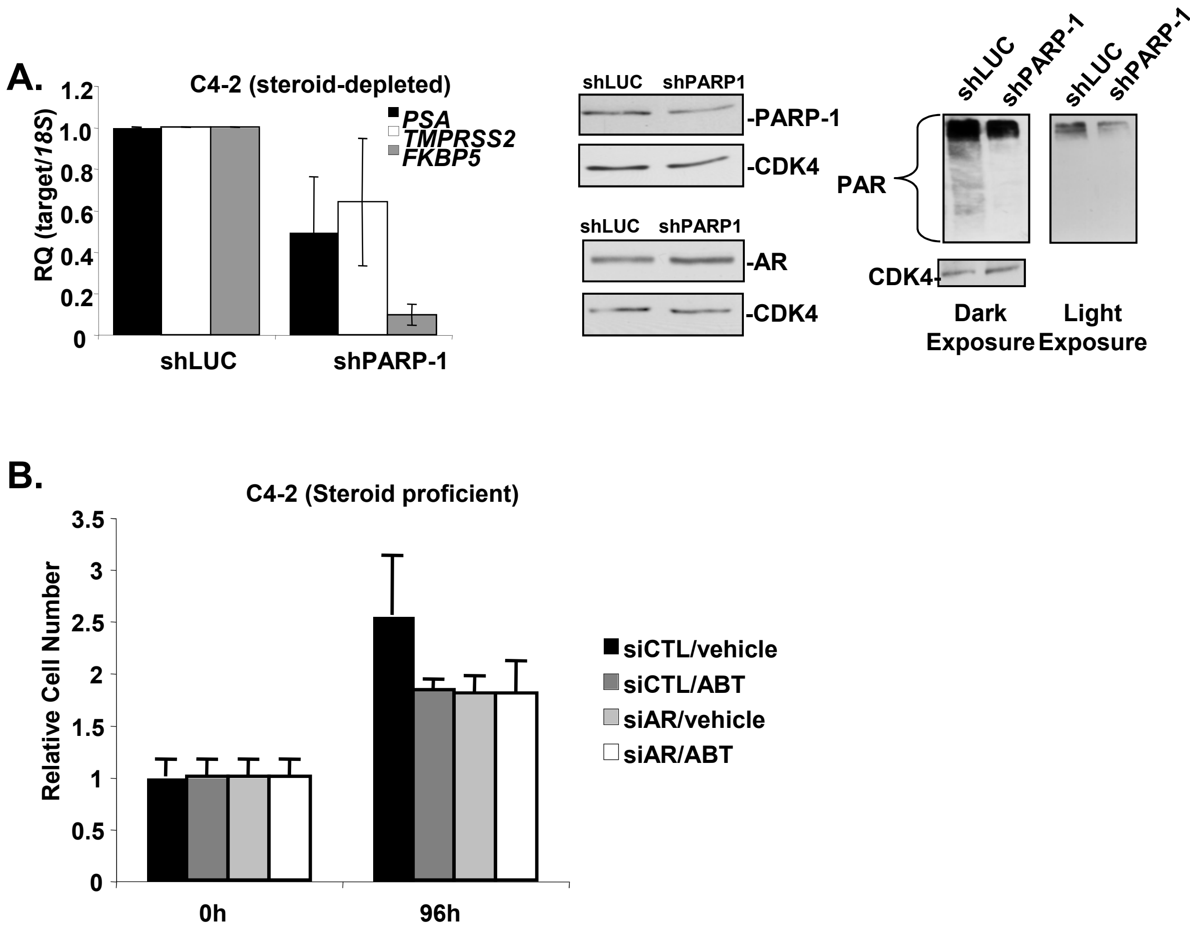
Supplemental Figure 5
LNCaP cells were steroid-deprived for 72h, pretreated for 30m with vehicle or ABT888 (2.5uM), then stimulated with DHT (10nM, 1h) or ethanol control. Cells were fixed, lysed, and chromatin immunoprecipitation (ChIP) for FoxA1 was performed. DNA was purified from immunoprecipitates (IPs) and utilized in qPCR reactions for indicated genomic loci. Data is representative of at least three independent experiments, each performed with technical triplicates, and depicted as the average of immunoprecipitated signal to input signal and standard deviation.

Supplemental Figure S6



Supplemental Figure 6
C4-2 cells were cultured in media containing complete serum, treated for 24h with either ethanol control (0.01%) or Casodex (1uM). Cells were harvested, and qPCR analyses for indicated AR target genes were performed. Data reflect average and standard error of at least three independent experiments, each performed with technical triplicates. Results were normalized to *18S* and control is set to “1”. Statistical significance was determined using Student’s *t* test. *=p<0.05, **=p<0.01, and ***=p<0.001

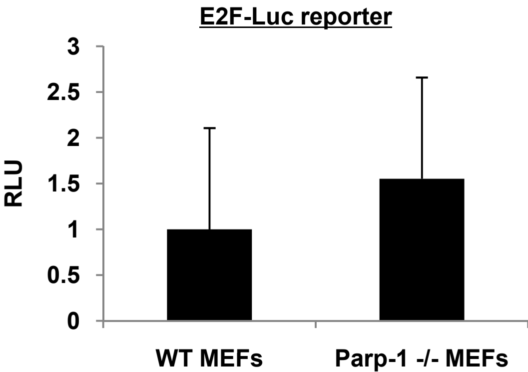
Supplemental Figure S7



Supplemental Figure 7

(A) Left: C4-2 cells were infected with indicated retroviral constructs. 24h later, culture conditions were changed to steroid-depleted media. 48h after media change, Cells were harvested, and qPCR analyses for indicated target genes were performed. Data reflect average and standard deviation of at least three independent experiments, each performed with biological and technical triplicates. Results were normalized to *18S* and control is set to “1”. Right: Cells were treated as above, harvested, lysed, and total protein was separated by SDS-PAGE, transferred to PVDF, and immunoblotted utilizing the indicated anti sera. (B) C4-2 were cultured in media containing complete serum, infected with a lentivirus coding for either a control shRNA or an shRNA directed toward AR. 24h later, cells were treated with either vehicle control or 2.5uM ABT888. 96h after treatment, cell number was assessed via trypan blue exclusion and a hemacytometer. Data reflect average and standard deviation of at least three independent experiments, each performed with biological triplicates. Cells infected with control siRNA and control treatment is set to “1”.

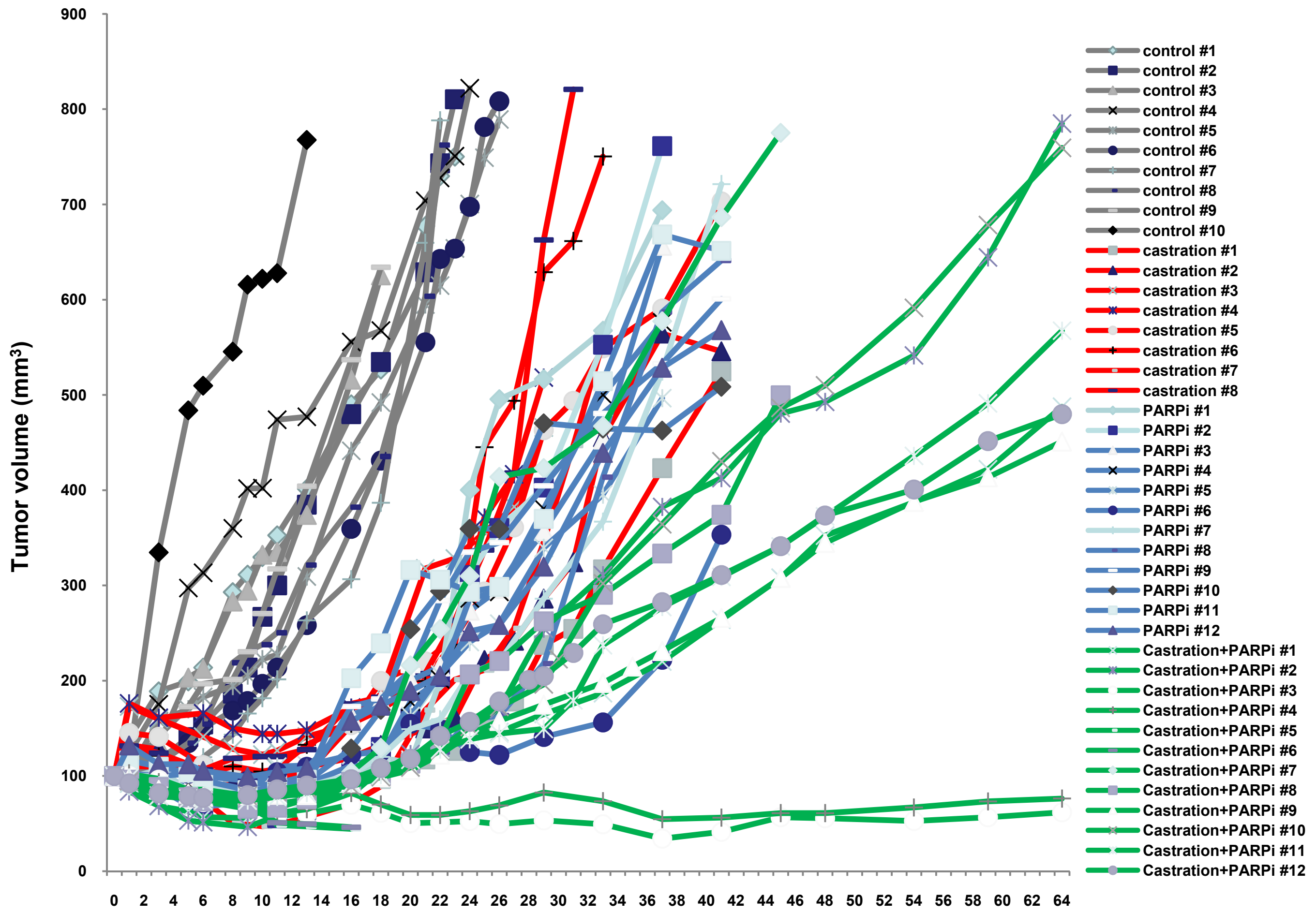
Supplemental Figure S8



Supplemental Figure 8

Indicated MEFs were transfected as described in Material and Methods. Cells were harvested 36 hours later and relative luciferase activity determined. Normalized E2F activity in the in the wild type MEFs was set to “1”. Data shown reflects the mean of at least nine independent biological replicates ±SD.

Supplemental Figure S9



Supplemental Figure 9

VCaP xenograft tumors were established as in Figure 5, tumors are the same as depicted in Figure 5D. Treatment was initiated when tumors reached 150mm^3, and consisted of: control, castration alone (Cx), ABT888 (100mg/kg twice daily)(PARPi), and castration + ABT888 (Cx+PARPi). Tumor volumes were assessed three times each week.