Supplementary figures legends

STable 1. Marker expressions representing each cell type.

SFigure 1. **CD133$^+$ cell numbers increase upon ADT/Casodex treatment. a.** Flow cytometric analysis of CD133$^+$ cells of LNCaP cell line upon Casodex (1 μM) treatment. Gradual increase in the CD133$^+$ cells at 1, wk 3, and wk 5 is shown. b. Flow cytometric analysis of CD133$^+$ cells of C4-2 cell line upon Casodex treatment. **c-f.** Human patient tissue staining of CD133, CD44, integrin, CK5, and CK8, before and after ADT.

SFigure 2. Separation of stem/progenitor and non-stem/progenitor cells from C4-2 and LAPC-4 cells. A. C4-2 cell line data. a. Flow cytometric separation of stem/progenitor cells using antibodies of CD133 and integrin. **b.** Morphology of stem/progenitor cells isolated. **c.** IF staining showing markers expressions in stem/progenitor and non-stem/progenitor cells. **d.** Western blot analysis of CD133, integrin, and PSA in stem/progenitor and non-stem/progenitor cells. **e.** Colony formation assay on soft agarose of stem/progenitor and non-stem/progenitor cells. **f.** Invasion and migration assay results of stem/progenitor and non-stem/progenitor cells. **B. LAPC-4 cell line data. a.** Flow cytometric separation of stem/progenitor cells using antibodies of CD133 and CD44. **b.** Morphology of stem/progenitor cells isolated. **c.** IF staining result showing marker expressions in stem/progenitor and non-stem/progenitor cells. All experiments were done three times (*$p < 0.05$, **$p < 0.01$ with student t test).

SFigure 3. Characteristics of Celprogen-PCSCs and AR expression effect on their self-renewal/proliferation. a. Flow Cytometric separation of CD44$^+$/integrin$^+$ cells. **b.** Morphology. **c.** Sphere formation on Matrigel. **d.** qPCR analysis results showing expression of S/P markers. The mRNAs of LNCaP and PC3 cells were used as controls. **e.** qPCR analysis results analyzing expression of AR mRNAs. **f.** Western blot analysis showing AR protein expressions. **g.** qPCR

analysis of AR mRNA expression when cells were grown in normal culture condition or as spheres on Matrigel coated plates. **h.** Growth analysis of parental, vector (V) or AR expressing stable clones (AR4 and AR12). AR expression in these clone cells were shown in lower panel. **i.** Sphere formation assay using AR expressing AR4 cells and vector control cells. **j.** qPCR analysis of AR mRNA expression in S/P cells grown in attached form and sphere form. All experiments were done three times (*$p < 0.05$, **$p < 0.01$ with student *t* test).

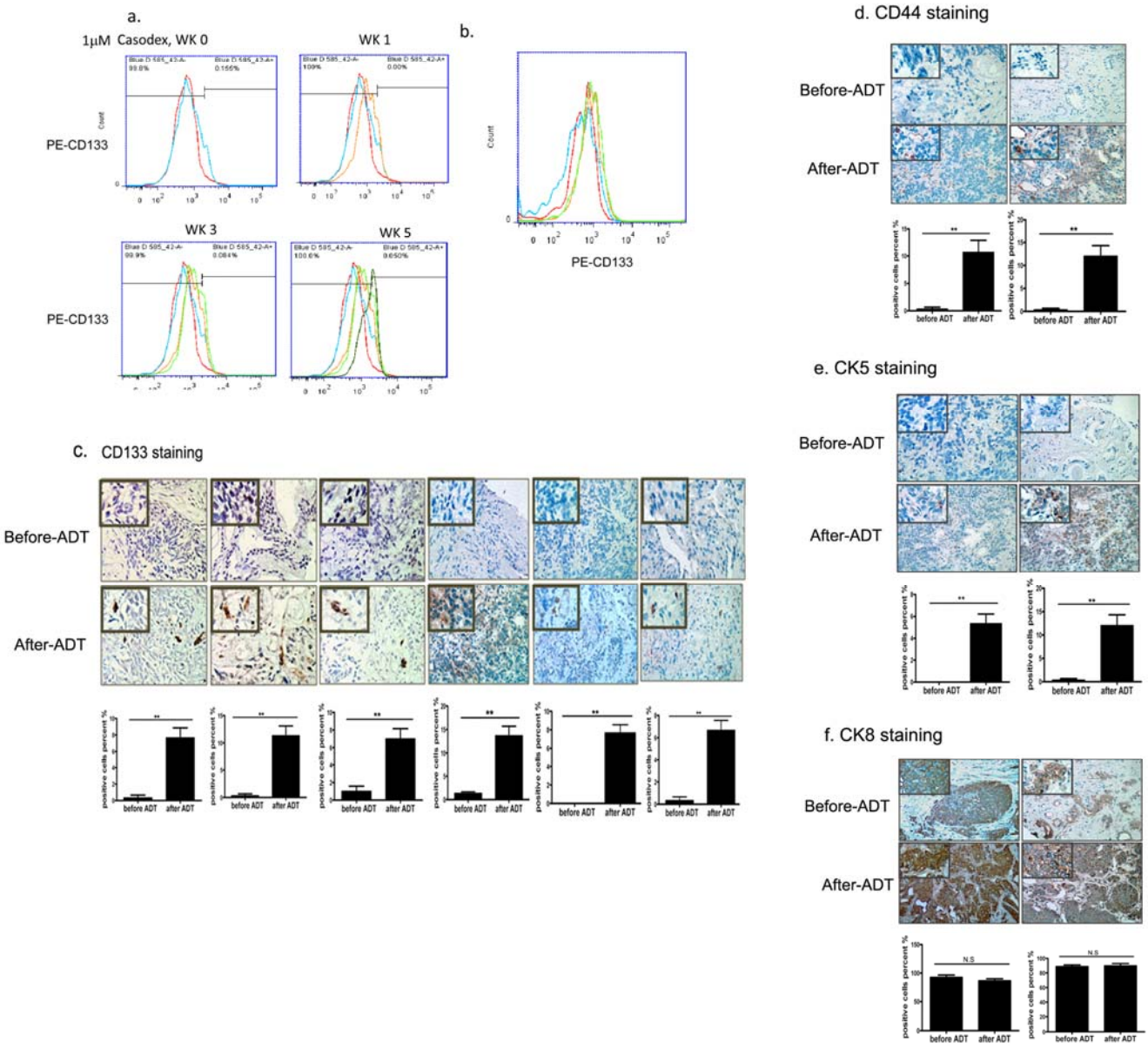
SFigure 4. Opposite roles of AR in self-renewal/proliferation of stem/progenitor and non-stem/progenitor cells of C4-2 cell line. All assays were performed after infection of stem/progenitor and non-stem/progenitor cells with lentivirus carrying vector or AR. **a.** MTT assay. Three different DHT concentrations were used (1 and 10 nM). **b.** Soft Agar colony formation assay. **c.** IF staining using Ki67 antibody. **d.** BrdU labeling IHC. **e.** Sphere formation assay. All experiments were done three times (*$p < 0.05$, **$p < 0.01$ with student t test).

SFigure 5. Opposite roles of AR in self-renewal/proliferation of stem/progenitor and non-stem/progenitor cells of LAPC-4 cell line. All assays were performed after infection of LAPC-4-stem/progenitor and non-stem/progenitor cells with lentivirus carrying vector (V), AR or AR-siRNA. **a.** Soft Agar colony formation assay. **b.** BrdU labeling IHC. **c.** Sphere formation assay. All experiments were done three times (*$p < 0.05$, **$p < 0.01$ with student t test).

SFigure 6. Activation of molecules in AR depleted stem/progenitor cells of C4-2 and PCSC cell lines. a. Western blot analysis of the indicated signal molecules using cell extracts of parental, stem/progenitor, and non-stem/progenitor cells of C4-2 cell line. **b.** Western blot analysis using cell extracts of stem/progenitor cells after vector (V)/AR carrying lentiviral infection. **c.** Western blot analysis using cell extracts of parental, vector or AR transfected PCSCs.

SFigure 7. Induction of AR expression upon 5-AZA treatment in LNCaP stem/progenitor and non-stem/progenitor cells. a. qPCR analysis showing AR mRNA expression. LNCaP stem/progenitor cells ($CD133^+$) cells were treated with 5 μM of 5-AZA for indicated times. **b.** Same treatment as 7a with LNCaP non-stem/progenitor ($CD133^-$) cells. **c,** MTT assay of LNCaP-stem/progenitor cells to obtain IC_{50} for two combinations of drugs. For H (high) dose: γ-TT, 5 μM and 5-AZA, 5 μM was used and for M (medium) dose: γ-TT, 2.5 μM and 5-AZA, 2.5 μM was used, and for L (low) dose, γ-TT, 1 μM and 5-AZA, 1 μM was used.

Supplementary Figure 1.



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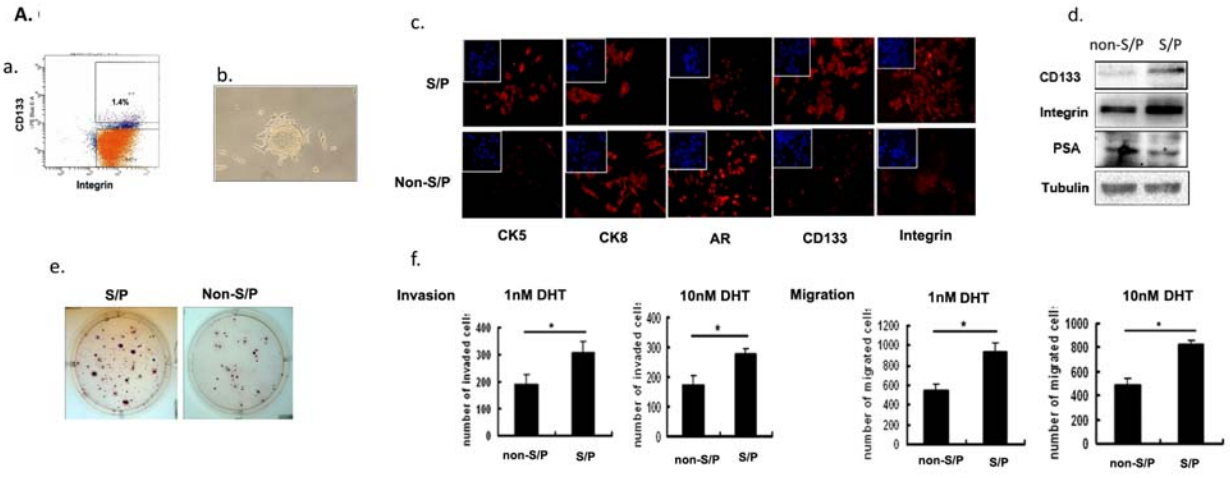

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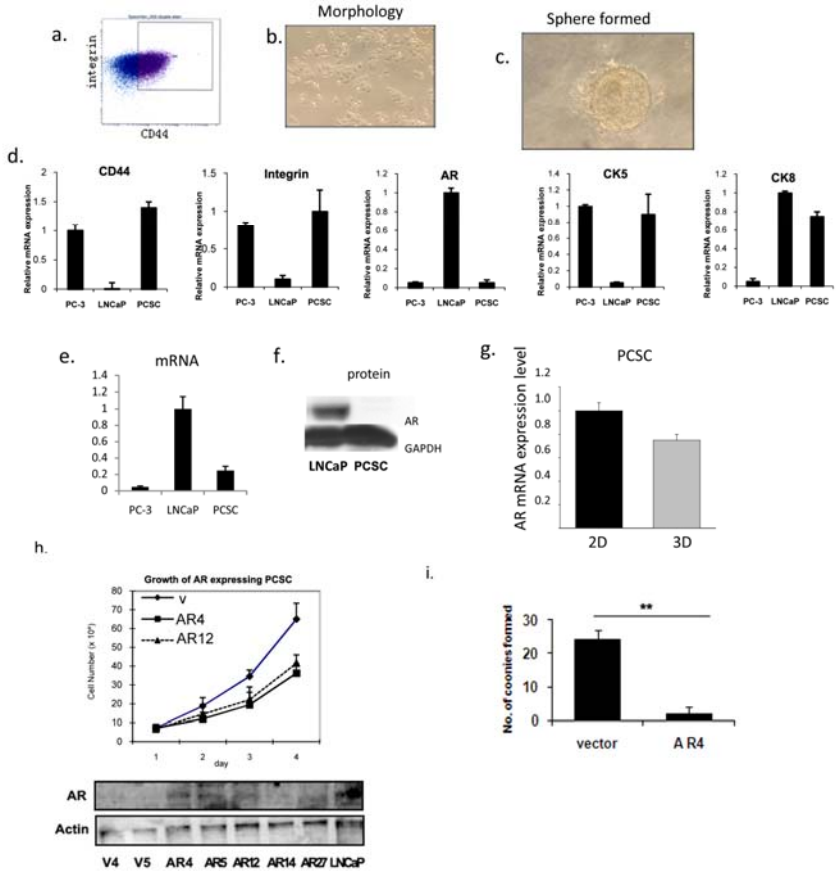

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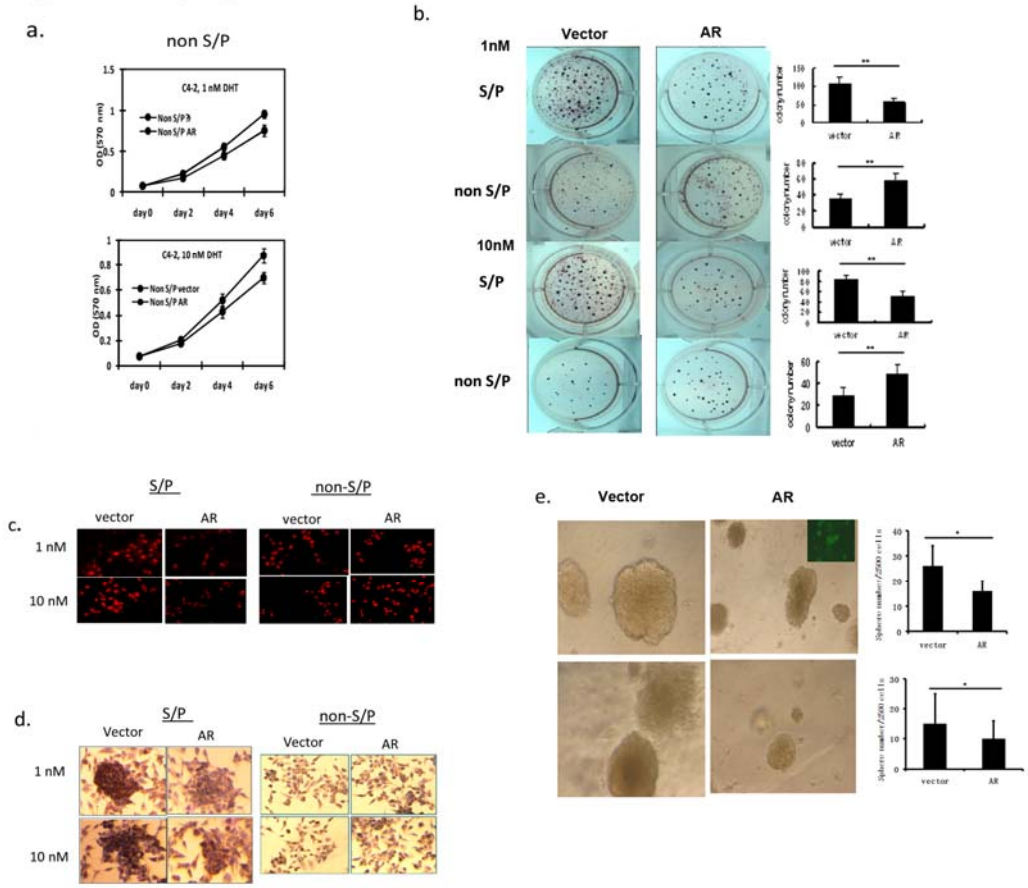

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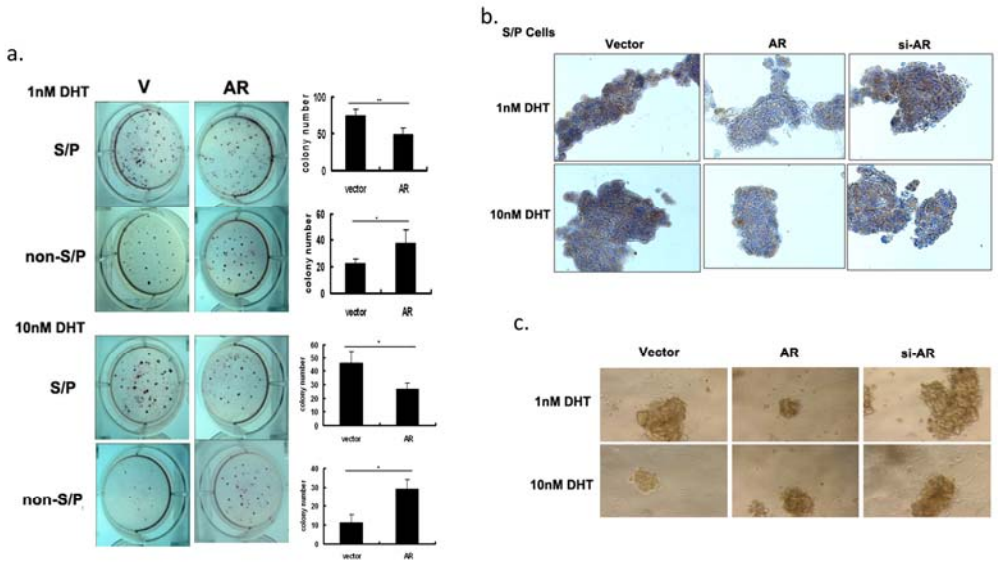

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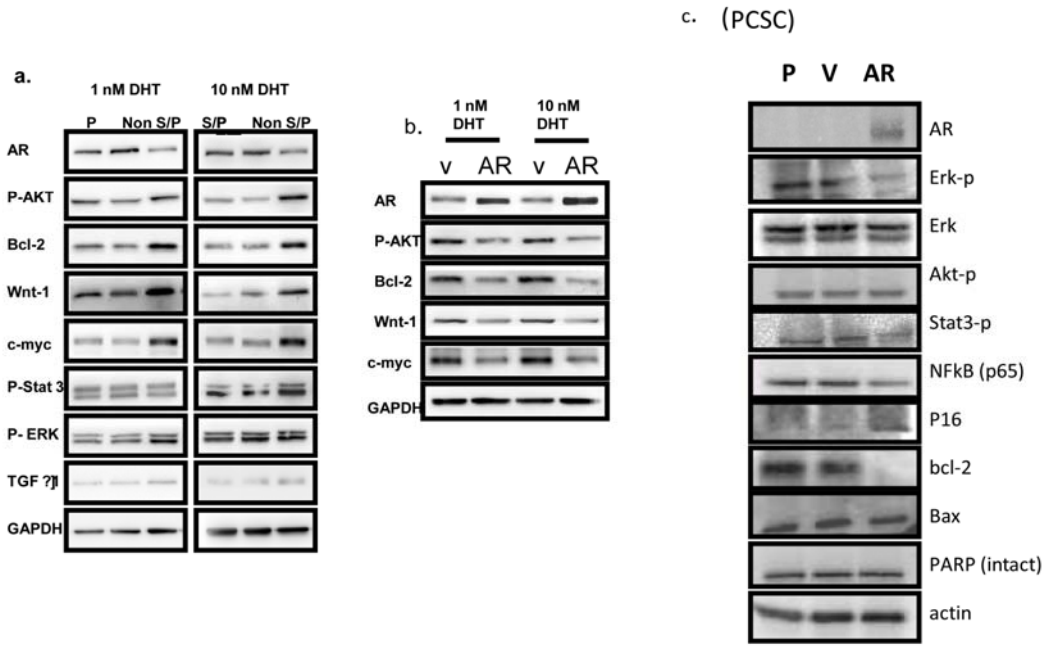
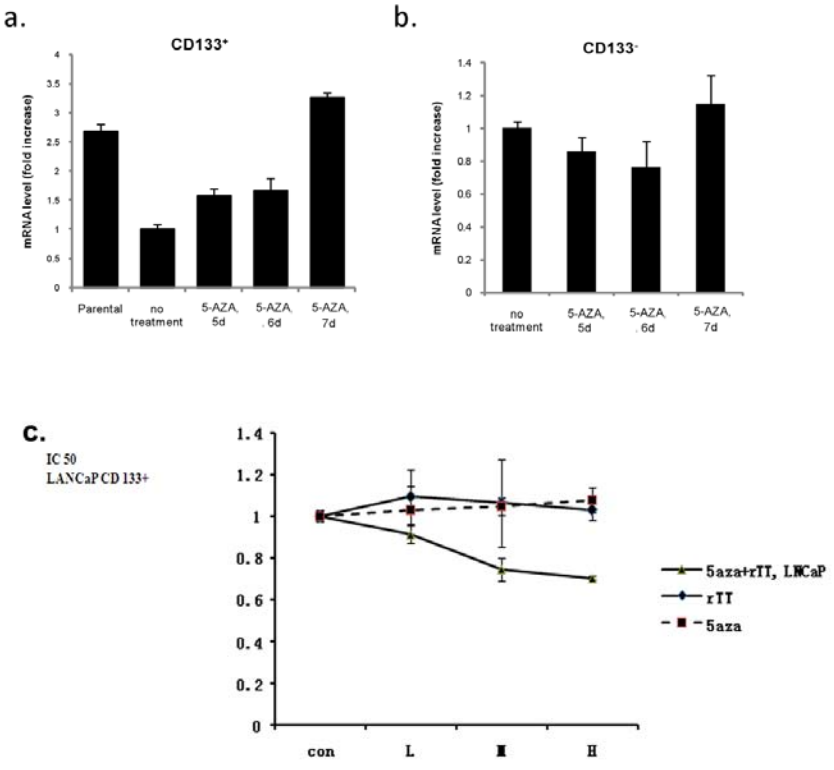


Supplementary Figure 7.



Supplementary
STable 1.

	Stem	Progenitor/ Transit Amplifying cells	Intermediate	Luminal
CD133	++	-/+	-	-
Integrin	++	++	+/-	-
CD44	++	++	+	_
CK5	+++	++	+	-
CK8	-	+	++	+++
AR	-	-/+	-/+	+++