

Supplementary Figure 1. Generation of *Foxa1* conditional knockout mice. Schematic representation of the strategy used to target the *Foxa1* gene in the mouse mammary gland. Mice carrying floxed *Foxa1* allele(s) were crossed into mouse strains that express *Cre*-recombinase; MMTV-*Cre* and *Krt14*-*Cre*. Gels show examples of PCR products representing the floxed and the WT genotypes of knockout mice.



Supplementary Figure 2. Deletion of the floxed *Foxa1* region in the mammary gland of *Foxa1* knockout mice. MMTVand *Krt14*-driven *Cre*-mediated *Foxa1* deletion as detected by PCR in the mouse mammary gland cells. PCR results showed deletion of *Foxa1* in heterozygous floxed *Foxa1*; *Krt14*-*Cre*, heterozygous floxed *Foxa1*; MMTV-*Cre* and homozygous floxed *Foxa1*; MMTV-*Cre* positive mice but not the control animals (*Foxa1^{t/+}*, *Foxa1^{t/+}*).



Supplementary Figure 3. Gating strategy for FACS analysis of three major epithelial cell populations in the murine mammary gland.



Supplementary Figure 4. Quantitation of ERα immunohistochemical staining of mammary glands from conditional *Foxa1* knockout mice. Bars show the mean H-score (Methods) of 2 mice/genotype with errors bars representing the range of H-scores.