

Tip30 controls differentiation of murine mammary luminal progenitor to estrogen receptor-positive luminal cell through regulating FoxA1 expression.

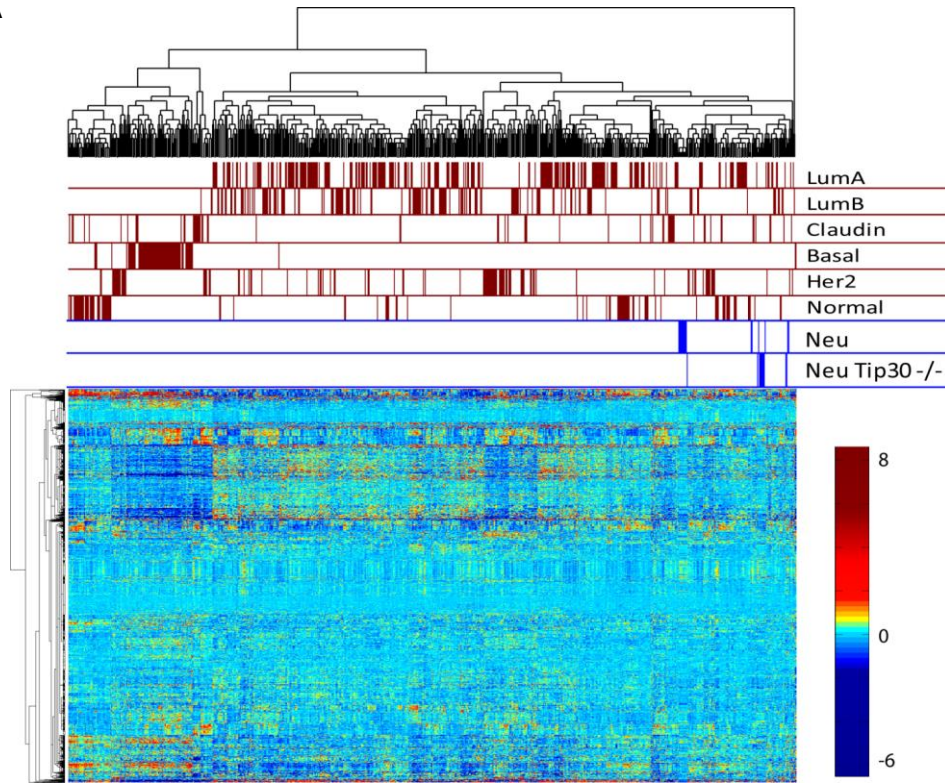
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Supplementary Figure S1. A. Gene expression profiles of *Tip30*^{-/-} *MMTV-Neu* tumors cluster closely with human luminal types of breast cancers. Nine *Tip30*^{-/-} *MMTV-Neu* tumor (Neu *Tip30*^{-/-}) and 15 tumor *MMTV-Neu* tumors (Neu) datasets were analyzed with 232 annotated human breast cancer datasets by hierarchical clustering using the methods described previously¹. Red represents genes that are upexpressed relative to the median, whereas green represents genes that are underexpressed relative to the median. Each color-coded bar indicates one human (brown) or mouse (blue) sample dataset. Human samples are indicated by intrinsic subtype as determined. Brown line indicates human sample; blue line indicates mouse sample. B: Examination of highly expressed genes in *Tip30*^{-/-} from (A) in human HER2+ breast cancer revealed a number of genes that predicted survival including examples such as Major Histocompatibility Complex (MHC). Samples with high (blue) or low (red) MHC expression were noted to have survival

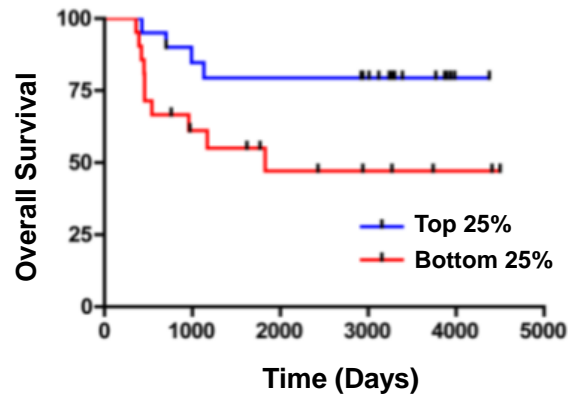
differences ($p=0.0369$).

Supplemental Figure 1

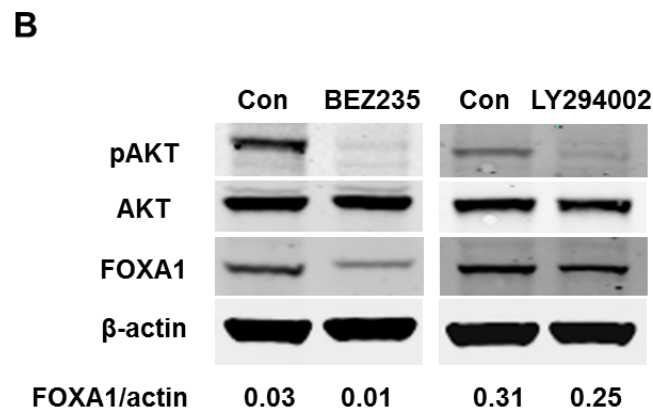
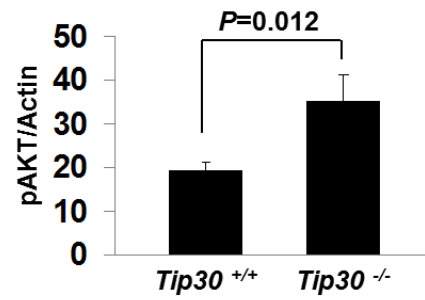
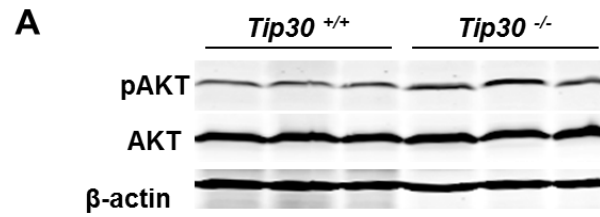
A



B



Supplementary Figure S2. Inactivation of AKT in *Tip30*^{-/-} mammary cells downregulated FOXA1 expression. A, Western blot analysis of pAKT and AKT protein levels in *Tip30*^{-/-} and *Tip30*^{+/+} mammary glands from 5 month old mice. Histogram represented the pAKT levels expressed as the percentages of β -actin in *Tip30*^{-/-} and *Tip30*^{+/+} mammary glands. Data were mean \pm SEM of three mice per group. B, Western blot analysis of pAKT, AKT and FoxA1 protein levels in *Tip30*^{-/-} mammary cells treated with or without NVP-BEZ235 and LY294002 respectively.



References

1. Perou CM, Sorlie T, Eisen MB, van de Rijn M, Jeffrey SS, Rees CA, *et al.* Molecular portraits of human breast tumours. *Nature* 2000, **406**(6797): 747-752.