

Supplementary Figure 1: Principal component analysis (PCA) of mouse 4NQO-induced oral squamous cell carcinoma cell lines. Top 2500 variable genes were used to generate PCA.

Supplementary Figure 2: qRT-PCR analysis of a selection of DEGs identified in B7E11 p63 knockdown cell line.

Supplementary Figure 3: qRT-PCR analysis of a selection of DEGs identified in B7E3 p63-inducible cell line.

Supplementary Figure 4: Boxplot of expression levels of the genes that constitute the combined p63-based mOSCC gene expression signature in the human TCGA HNSCC cohort.

Supplementary Figure 5: Kaplan-Meier survival analysis of the genes that constitute the combined p63-based mOSCC gene expression signature in the human TCGA HNSCC cohort.

Supplementary Figure 6: Immunofluorescent staining of COTL1 shows novel nuclear staining in areas of low DNA density, except for actively dividing cells in which difused COTL1 expression is observed surrounding the condensed DNA. Yellow arrows highlight the punctual staining of COTL1, while white arrows highlight the diffuse staining of COTL1.

Supplementary Figure 7: Full Western blots of parental mouse 4NQO-induced cell lines B7E3, B4B8, and B7E11 as seen in Figure 1.

Supplementary Figure 8: Full Western blots of B7E11 p63 knockdown cell line as seen in Figure 3.

Supplementary Figure 9: Full Western blots of B7E3 inducible p63 cell lines as seen in Figures 4 and 6.

Supplementary Table 1: Combined Table showing results of mOSCC cell line DEG analyses.

Supplementary Table 2: B7E11 p63 ChIP-seq Combined Sites.

Supplementary Table 3: B7E11 p63 knockdown DEG list.

Supplementary Table 4: B7E11 p63 inducible DEG list.

Supplementary Table 5: Combined loss- and gain-of-function p63-based mOSCC Signature.

Supplementary Table 6: 4NQO-induced mOSCC DEG analysis.

Supplementary Table 7: Combined overall p63-based gene expression signature.

Supplementary Table 8: scRNA-seq DEG analysis based on p63^{high} versus p63^{low} cell populations.

Supplementary Table 9: List of primers utilized in qRT-PCR analysis.

Figure S1

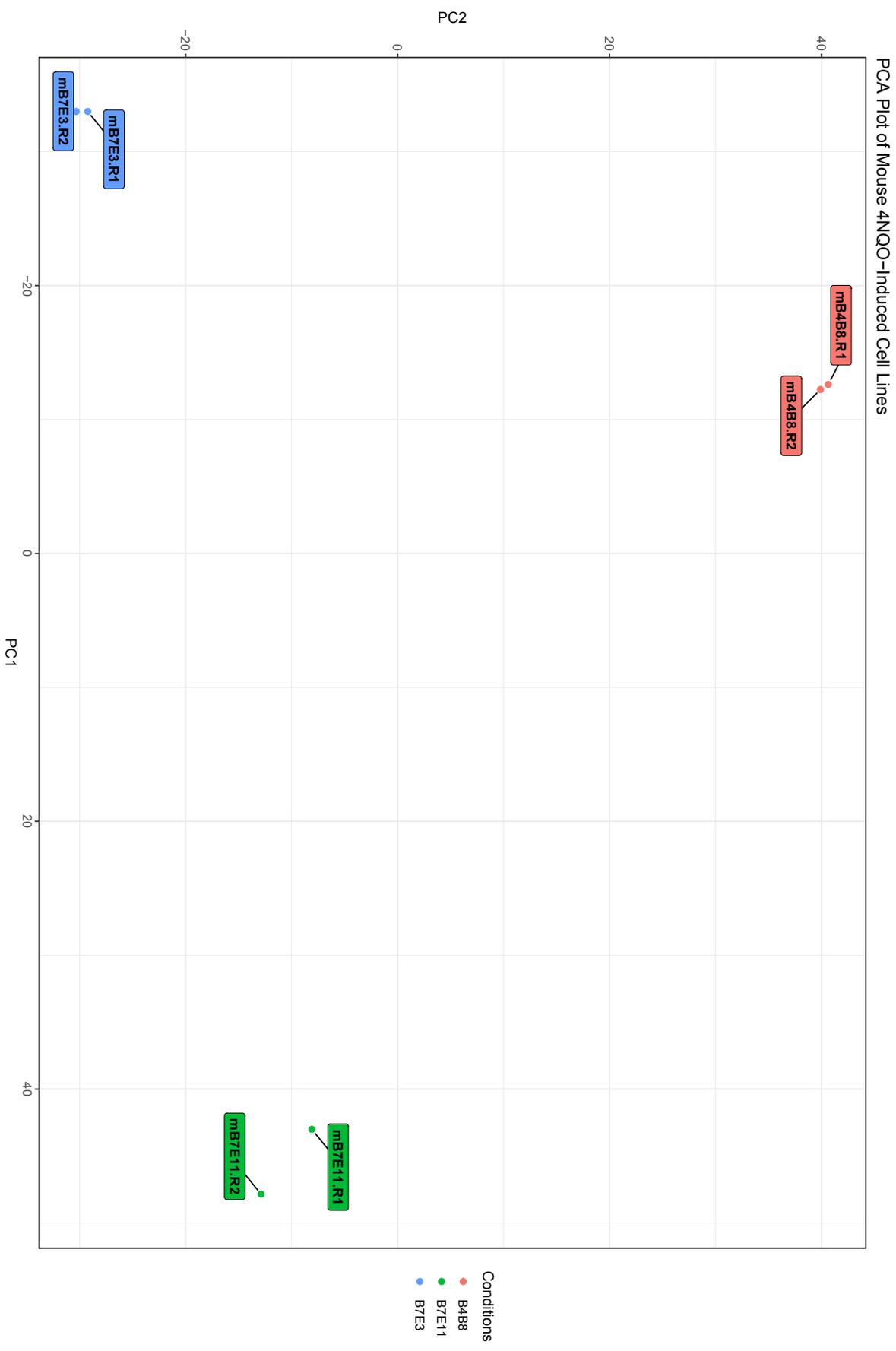


Figure S2

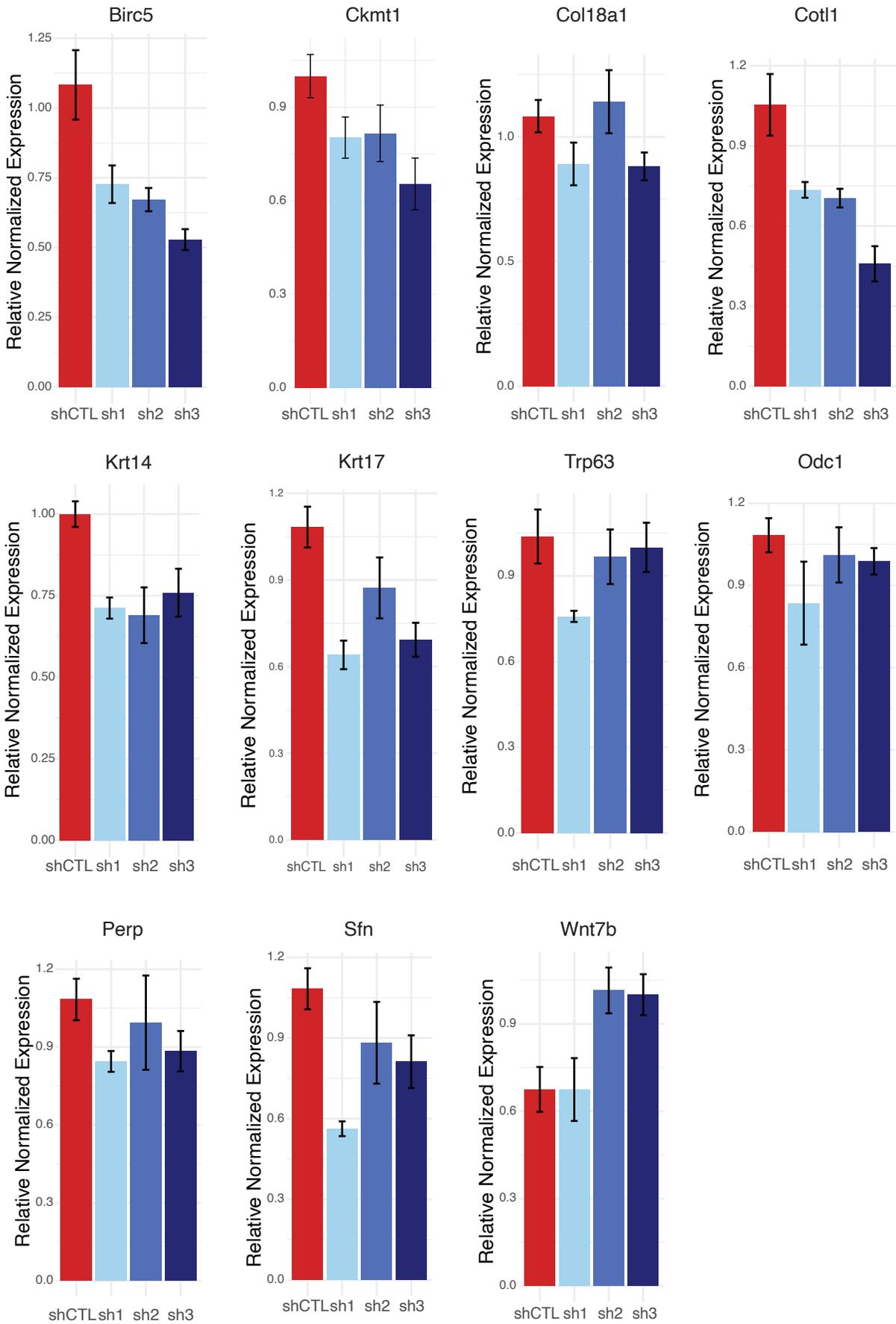


Figure S3

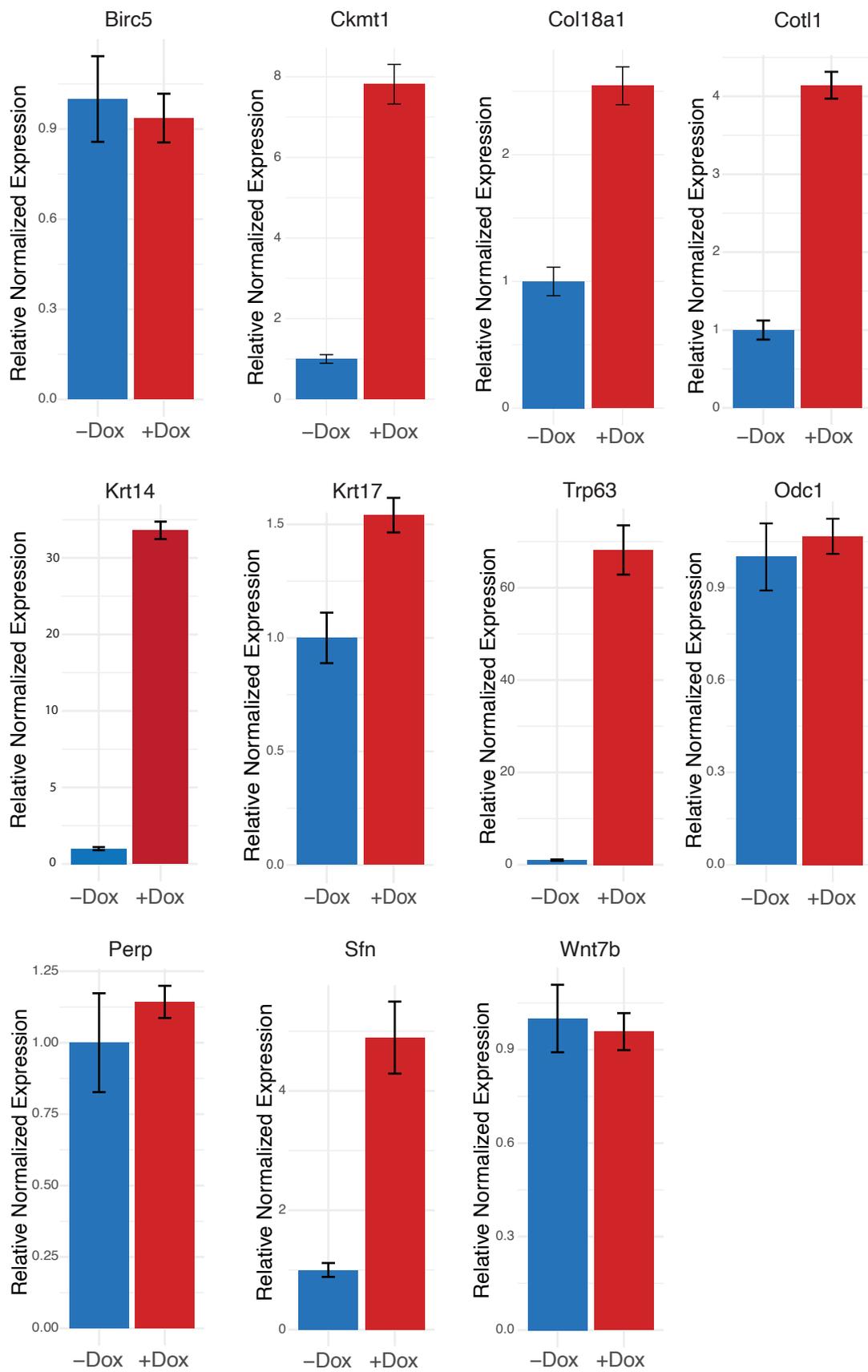


Figure S4

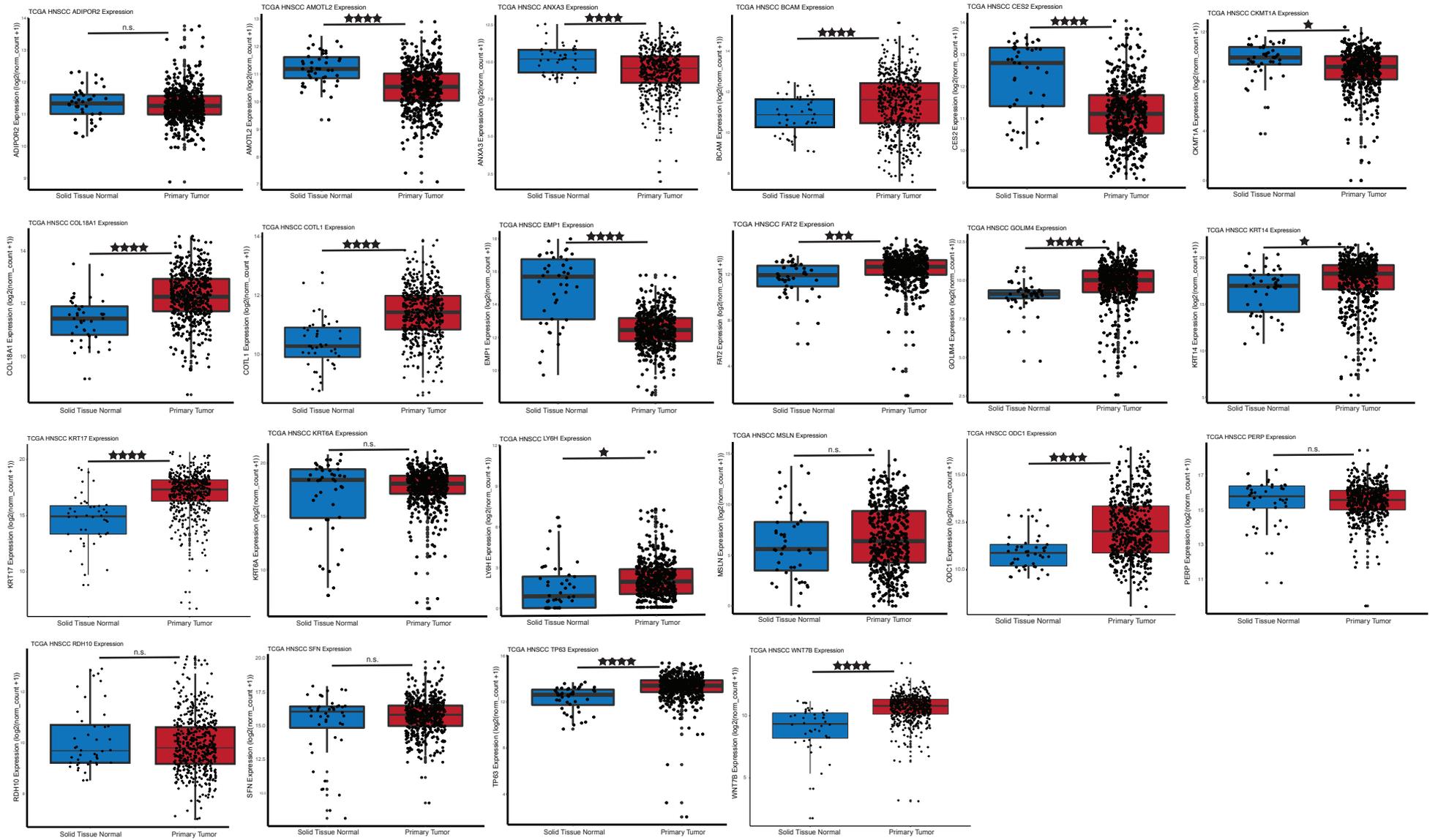


Figure S5

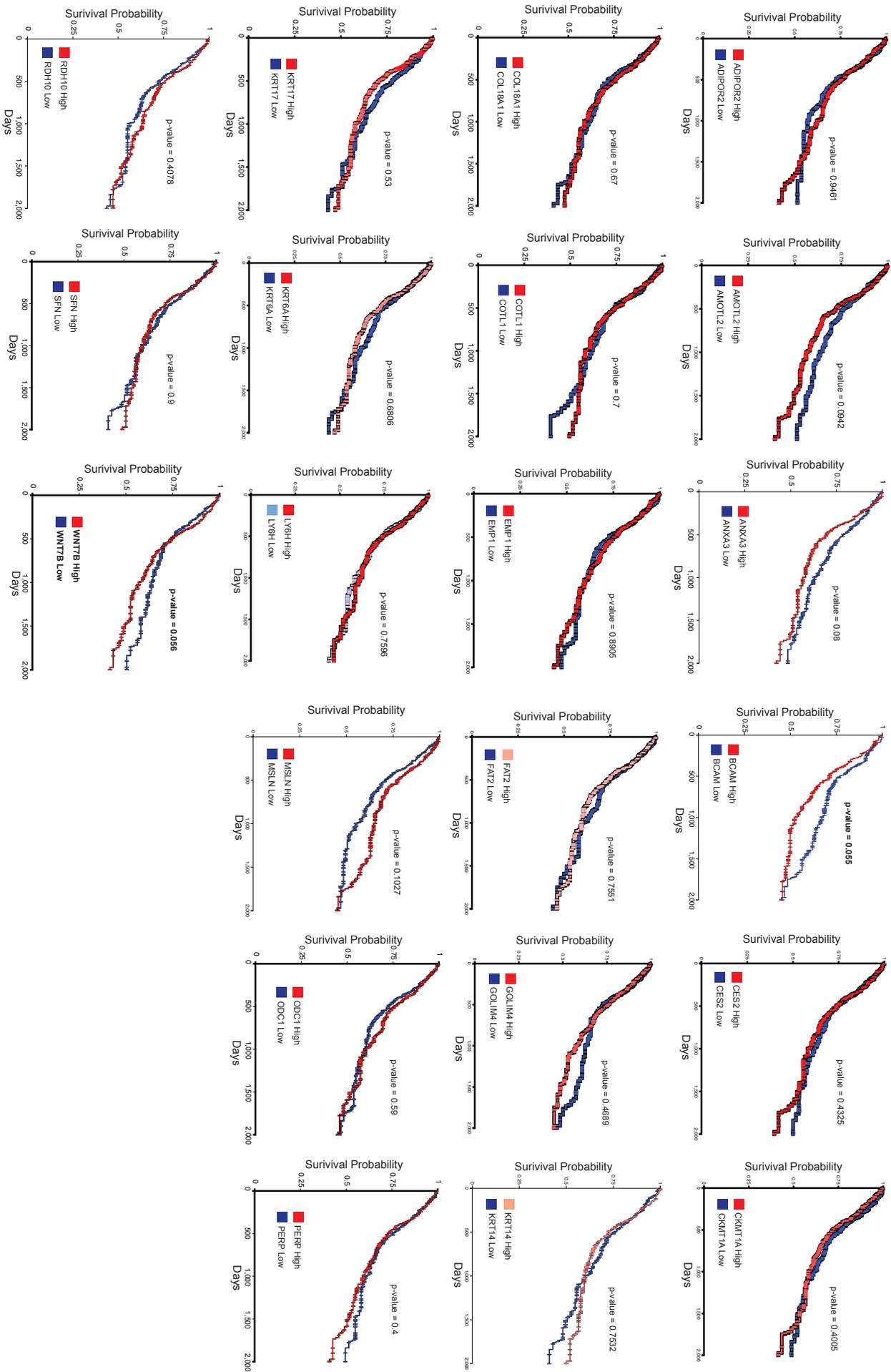
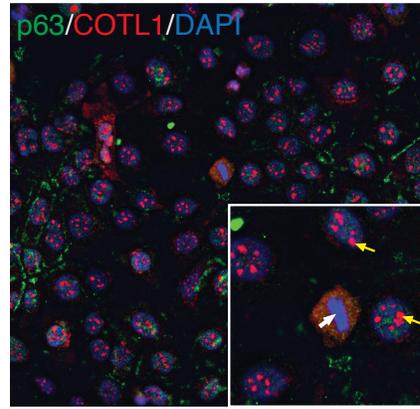
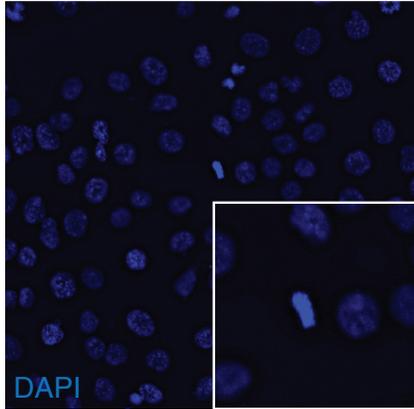
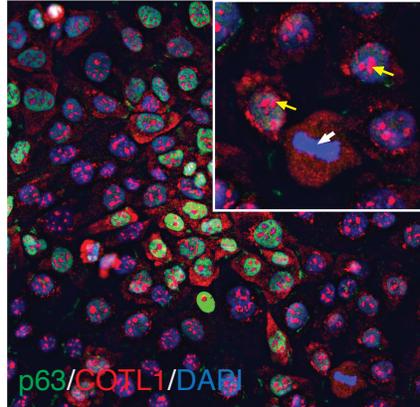
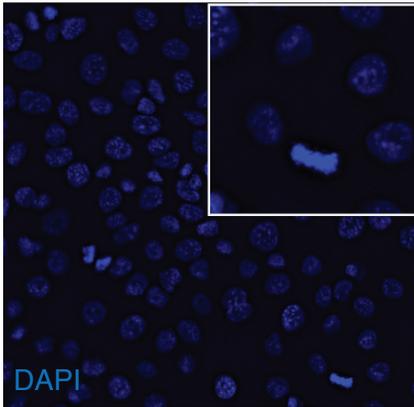


Figure S6

B7E3 pIND-Trp63 No Dox



B7E3 pIND-Trp63 50 ng Dox



B7E3 pIND-Trp63 200ng Dox

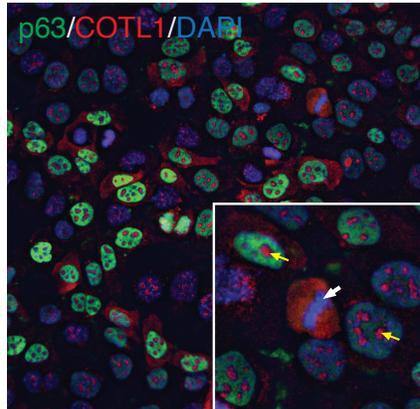
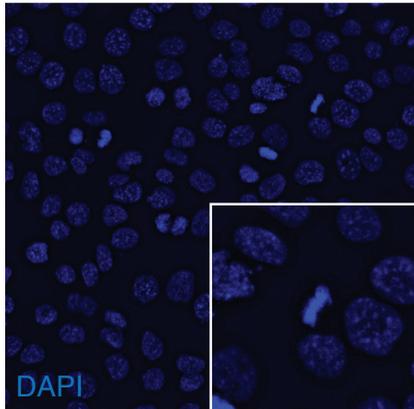


Figure S7

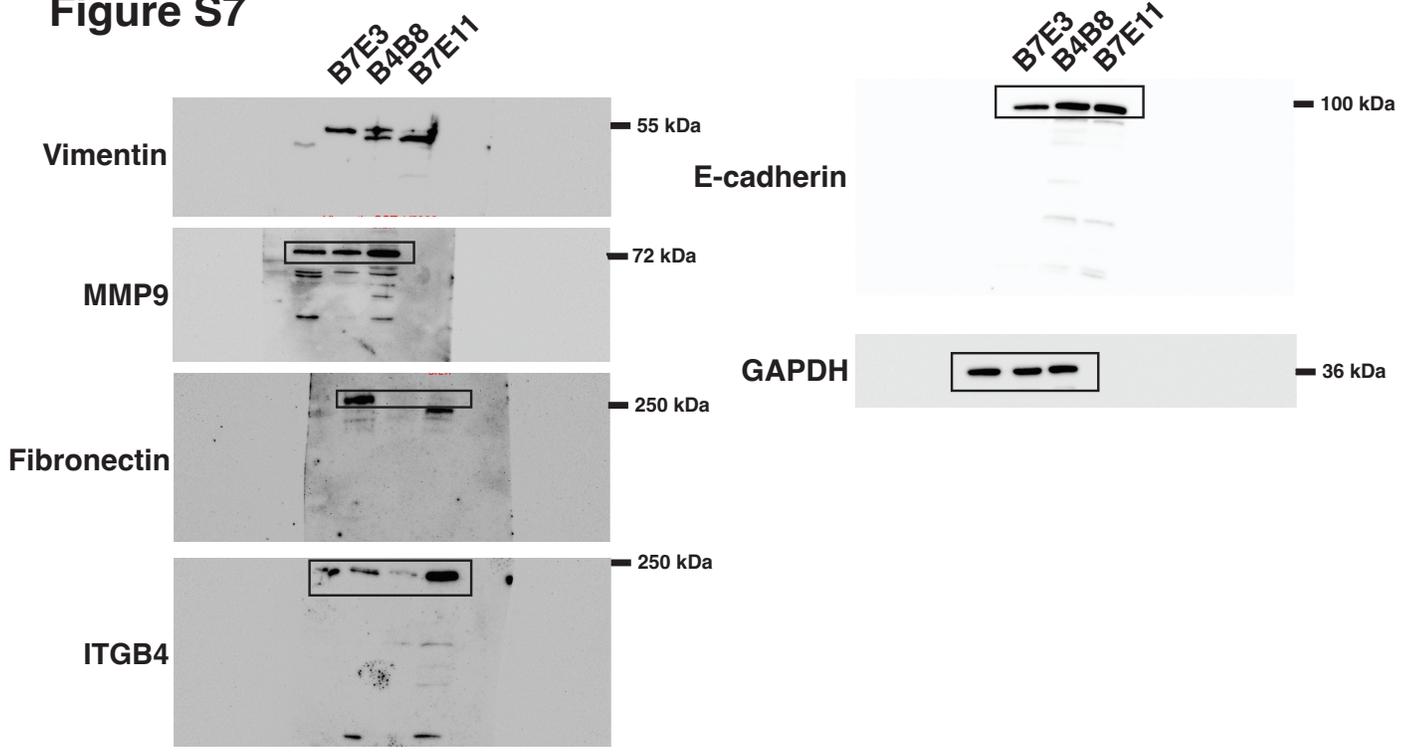


Figure S8

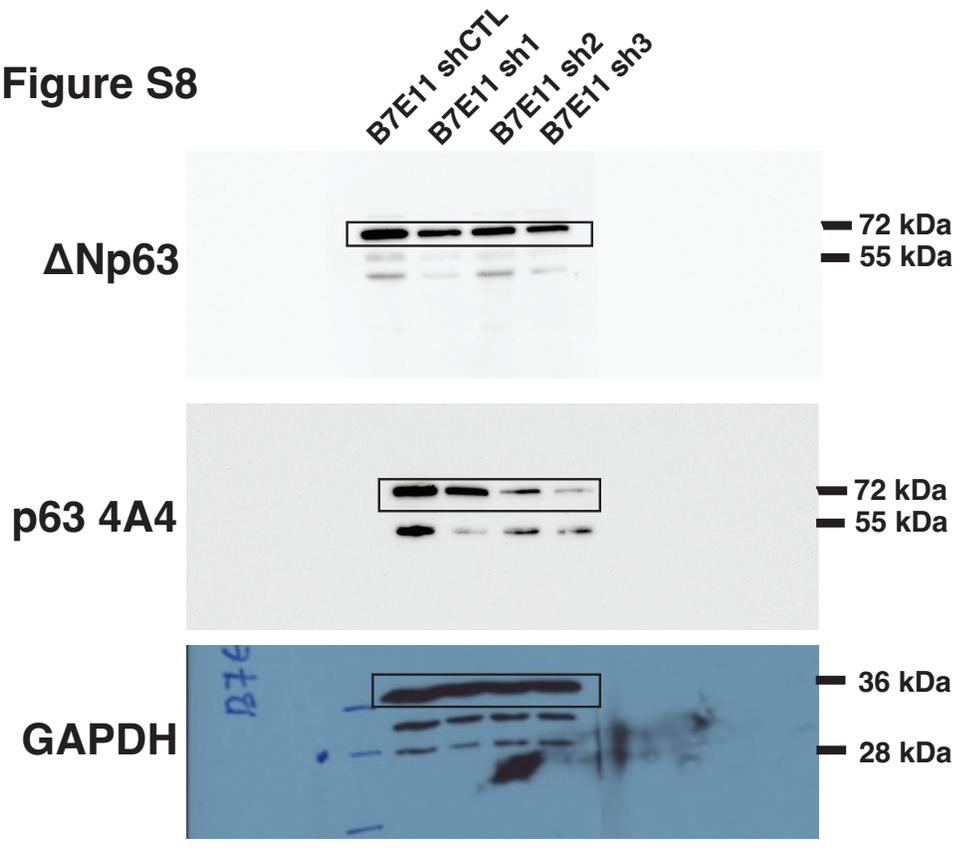


Figure S9

