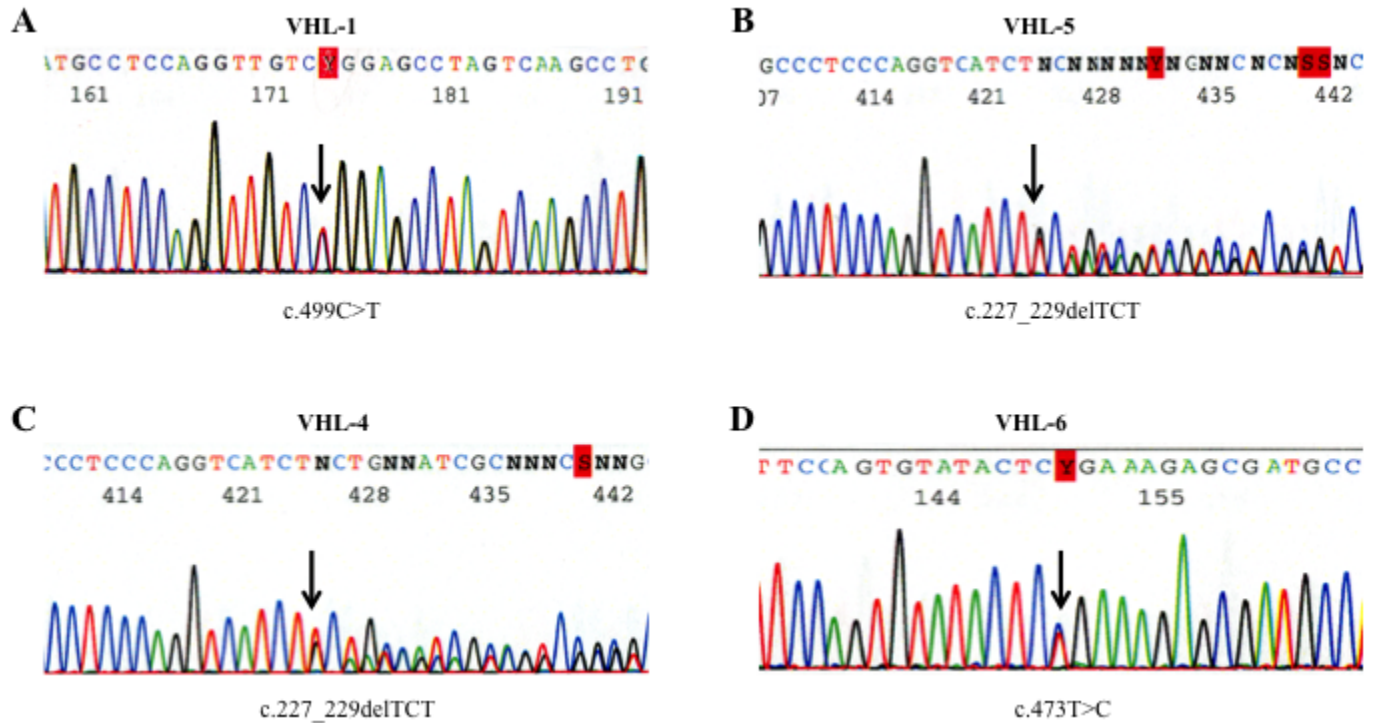
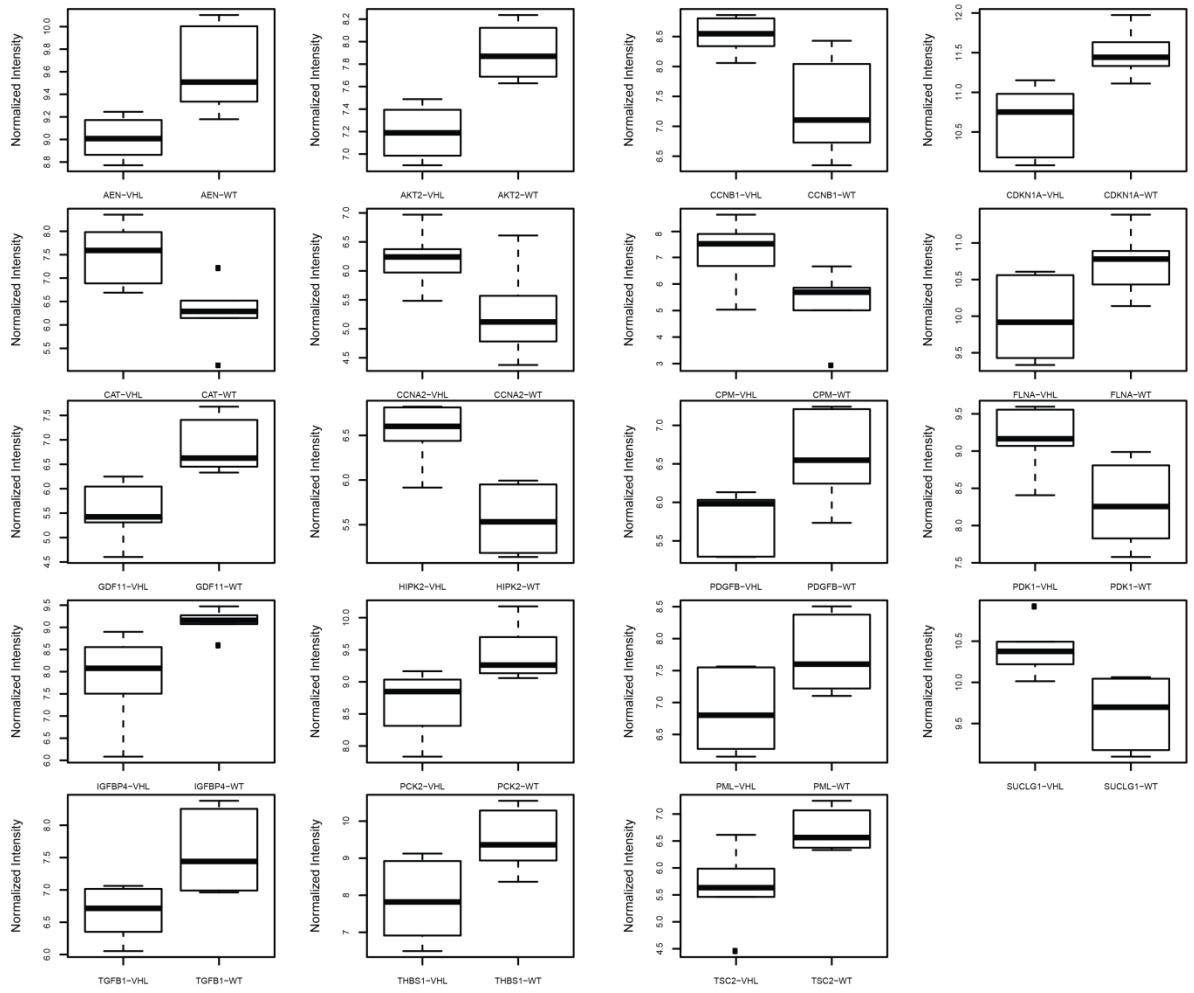


Haploinsufficiency in tumor predisposition syndromes: altered genomic transcription in morphologically normal cells heterozygous for *VHL* or *TSC* mutation

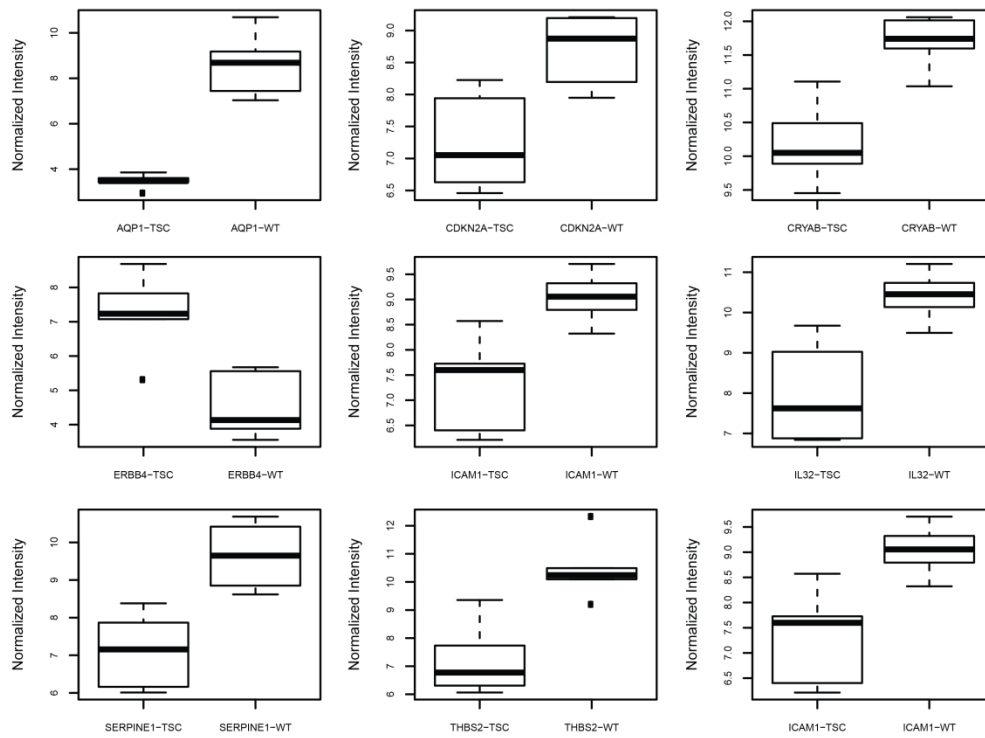
Supplementary Material



Supplemental Figure 1: Electropherograms showing the VHL sequence variants identified in 5 primary renal epithelial cell cultures from VHL patients.

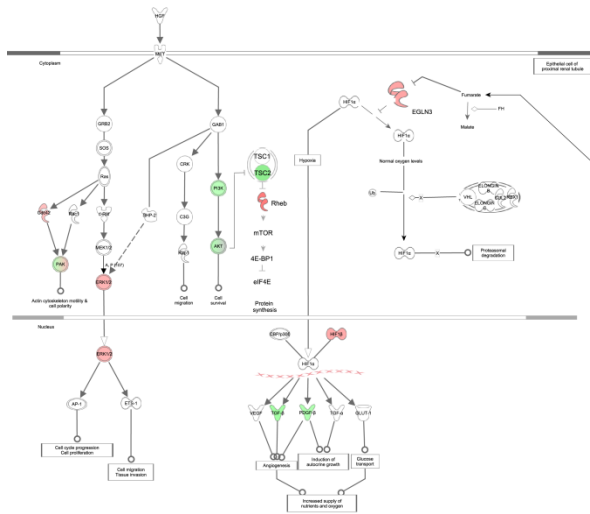


Supplemental Figure 2: Box plots of genes differentially expressed between VHLmut/wt heterozygous cells and WT cells.

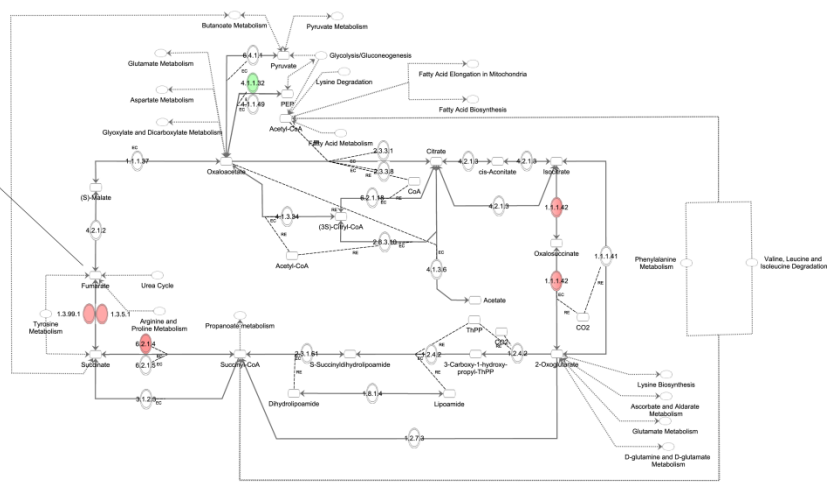


Supplemental Figure 3: Box plots of genes differentially expressed between TSCmut/wt heterozygous cells and WT cells.

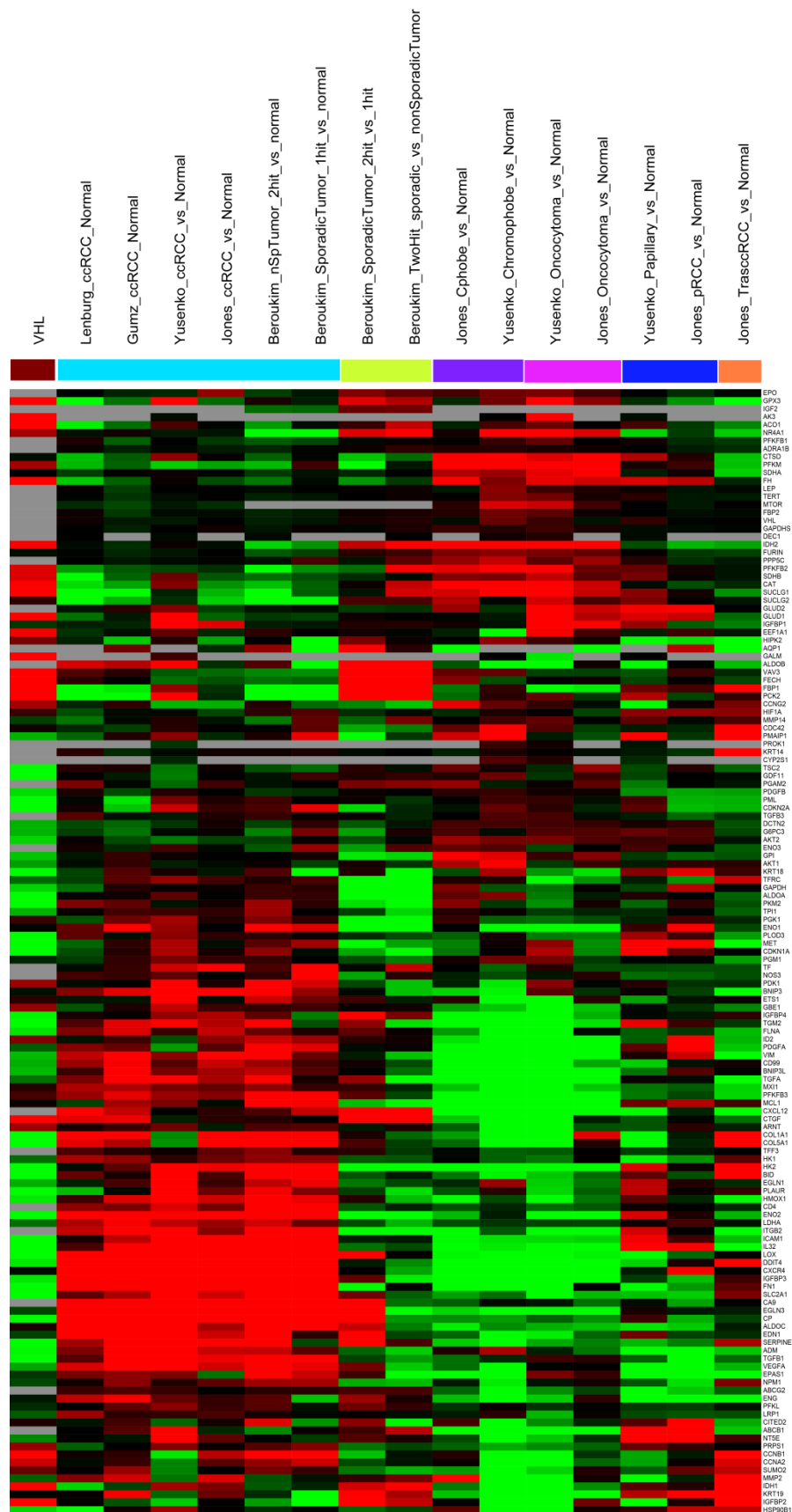
Signaling events in Renal cell carcinoma



Citric acid cycle



Supplemental Figure 4: Ingenuity Pathway Analysis-based ccRCC pathway showing HIF, AKT/mTOR and TCA cycle pathways.



Supplemental Figure 5: Fold-changes of genes from various categories differentially expressed in VHLmut/wt cells or RCC vs. normal kidney epithelium.