

Supplementary Figure Legends

Supplementary Figure 1: Cell outlier removal. (A) Outlier detection for DU145 sensitive cells. (B) Outlier detection for DU145 resistant cells. (C) Outlier detection for PC3 sensitive cells. (D) Outlier detection for PC3 resistant cells. The dashed line in all panels denotes the threshold used to identify outlier cells.

Supplementary Figure 2: Gene Expression Profiles. Average expression and number of cells expressing each gene in (A) DU145 sensitive, (B) DU145 resistant, (C) PC3 sensitive, and (D) PC3 resistant cells. (E) Position of 436 shared genes in gene rank of gene expression in DU145 resistant cells.

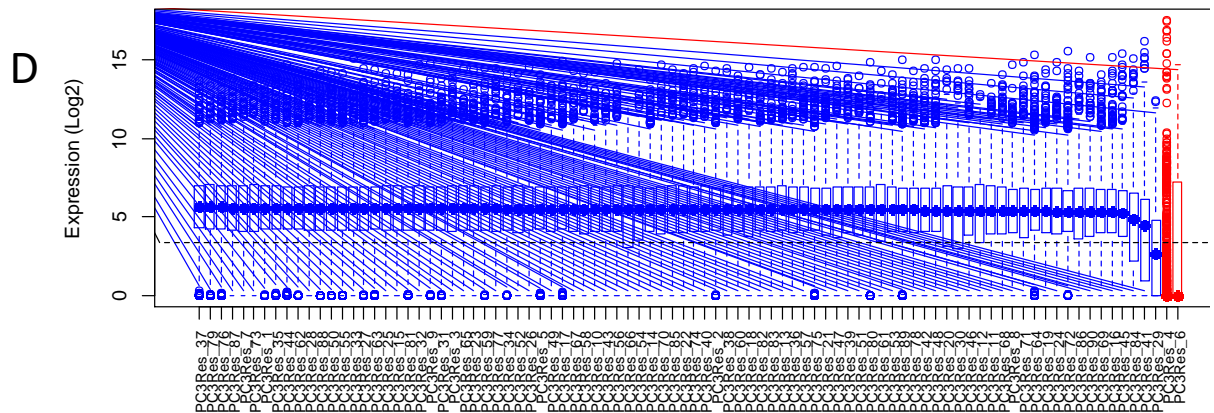
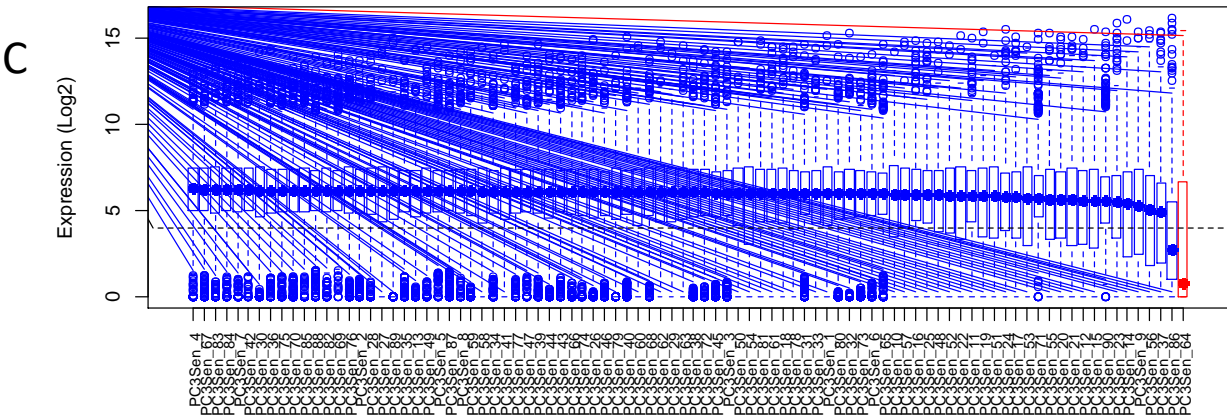
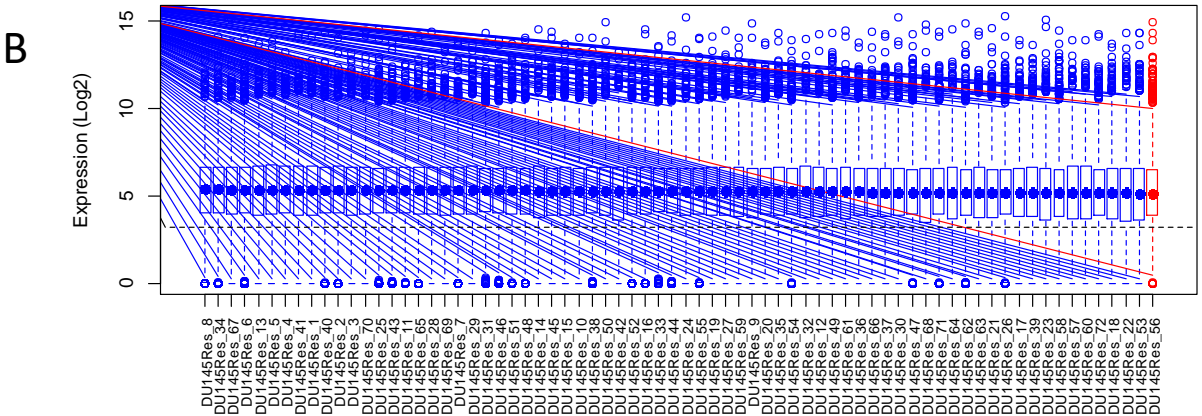
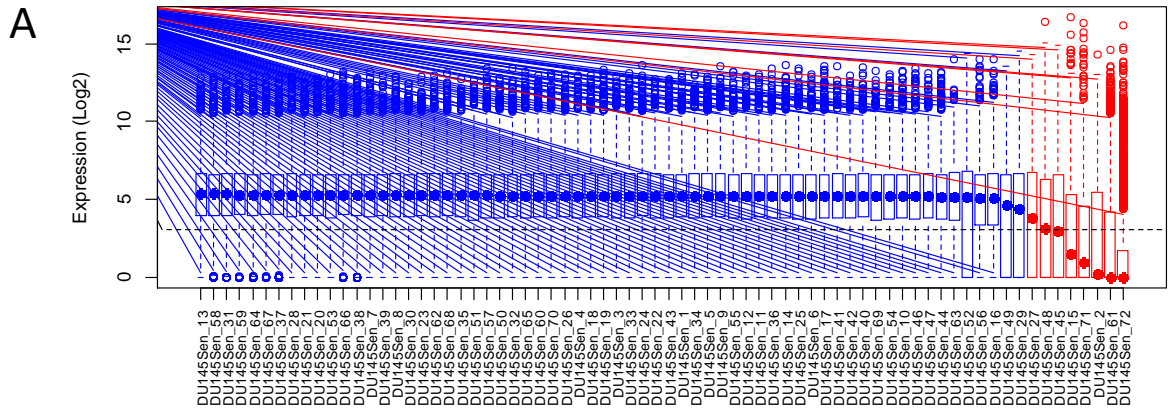
Supplementary Figure 3: Technical Variation in DU145 clusters. (A) Number of total reads in DU145 resistant, resistant-transcriptome-like sensitive and sensitive cells. (B) Percentage of mapped reads in DU145 resistant, resistant-transcriptome-like sensitive and sensitive cells. (C) Percentage of unique reads in DU145 resistant, resistant-transcriptome-like sensitive and sensitive cells. (D) Number of unique genes in DU145 resistant, resistant-transcriptome-like sensitive and sensitive cells. (E) Number of unique transcripts in DU145 resistant, resistant-transcriptome-like sensitive and sensitive cells. (F) The 436 genes that were similarly expressed in both the DU145 resistant-transcriptome-like sensitive and the DU145 resistant cells are noted as black lines at the position of each gene's rank on a plot that represents the ranking of all genes based on transcript expression.

Supplementary Figure 4: Upstream Regulator Analyses in Bulk Sequencing Samples. (A) Results for the comparison of the DU145 cell lines. (B) Results for the comparison of the PC3 cell lines.

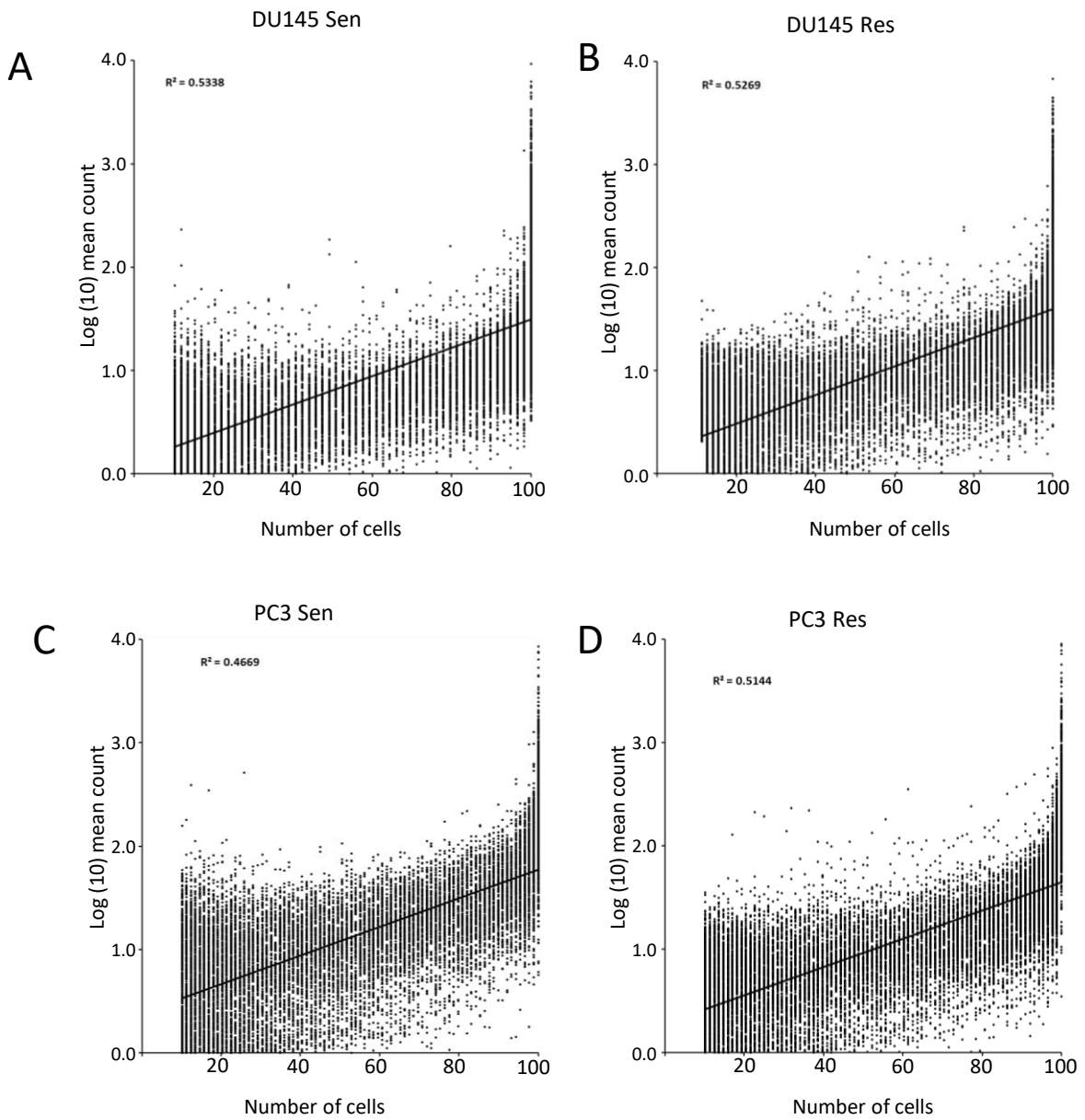
Supplementary Figure 5: Comparison of NUPR1 Target Gene Expression between Single Cell and Bulk Sequencing Samples. (A) Dot plot of gene expression in single cell sequenced cell lines. (B) Dot plot of gene expression in bulk sequenced cell lines. (C) Fold change between DU145 resistant and sensitive cells lines either sequenced as single cells or in bulk. (D) Fold change between PC3 resistant and sensitive cell lines either sequenced as single cells or in bulk. (E) Dot plot of statistical significance of 12 NUPR1 target genes in the comparison of DU145 or PC3 resistant and sensitive cells lines either sequence as single cells or in bulk.

Supplementary Figure 6: NUPR1 necessary for docetaxel resistance in PC3 cells. (A) Western Blot of NUPR1 knockdown in PC3-Rcells. (B) mRNA expression of NUPR1 in PC3-R cells after NUPR1 or control knockdown. (C) Cell viability in PC3 cells after docetaxel treatment after control or NUPR1 knockdown. (D) IC50 of PC3 cells following either control or NUPR1 knockdown. (E) Western Blot of NUPR1 overexpression in PC3 sensitive cells. (F) mRNA expression of NUPR1 in PC-S following NUPR1 or vector overexpression. (G) Cell viability of PC3 cells after docetaxel treatment and NUPR1 or control overexpression. (H) IC50 of PC3 cells following either control of NUPR1 overexpression.

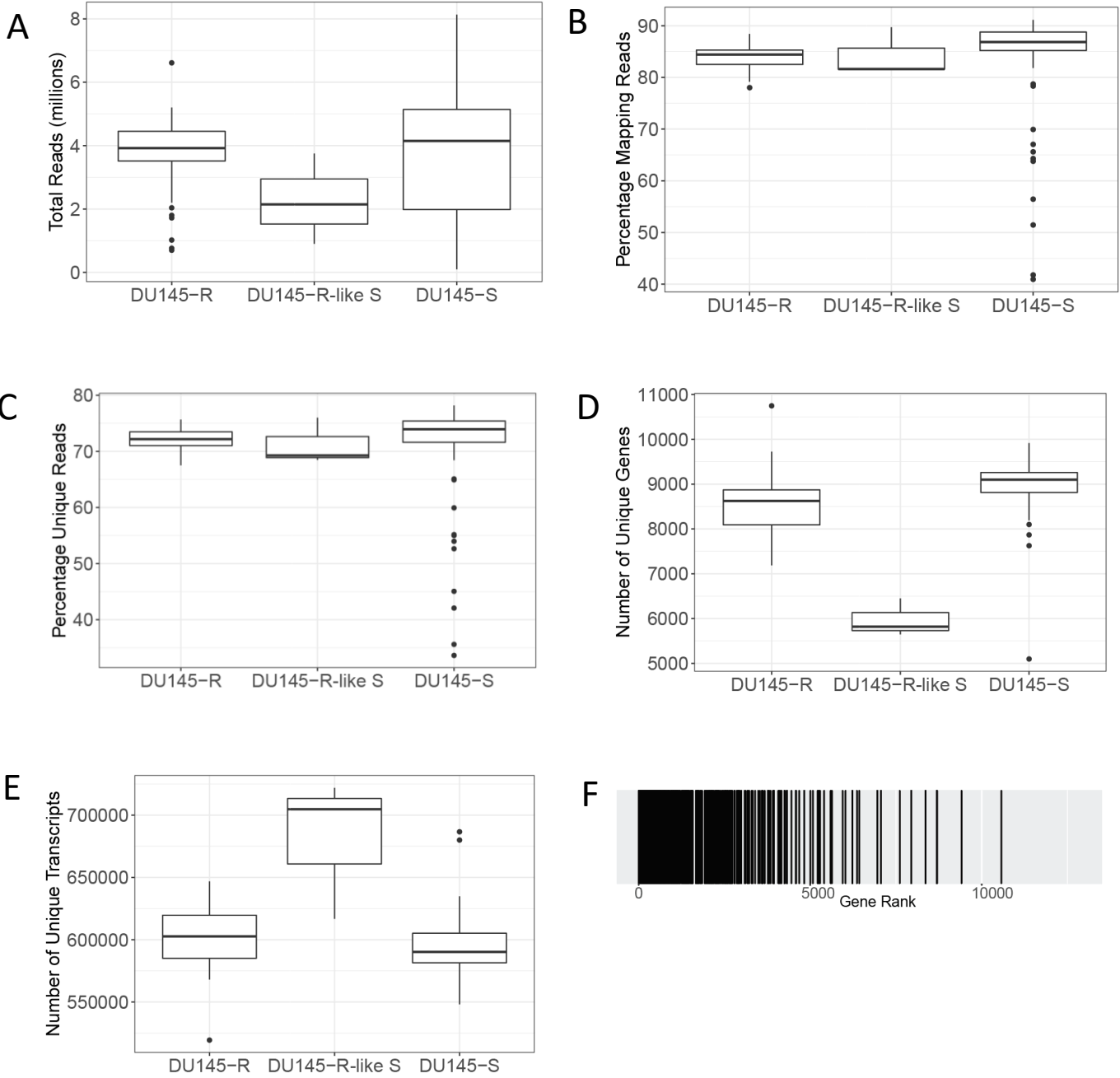
Supplementary Figure 1



Supplementary Figure 2

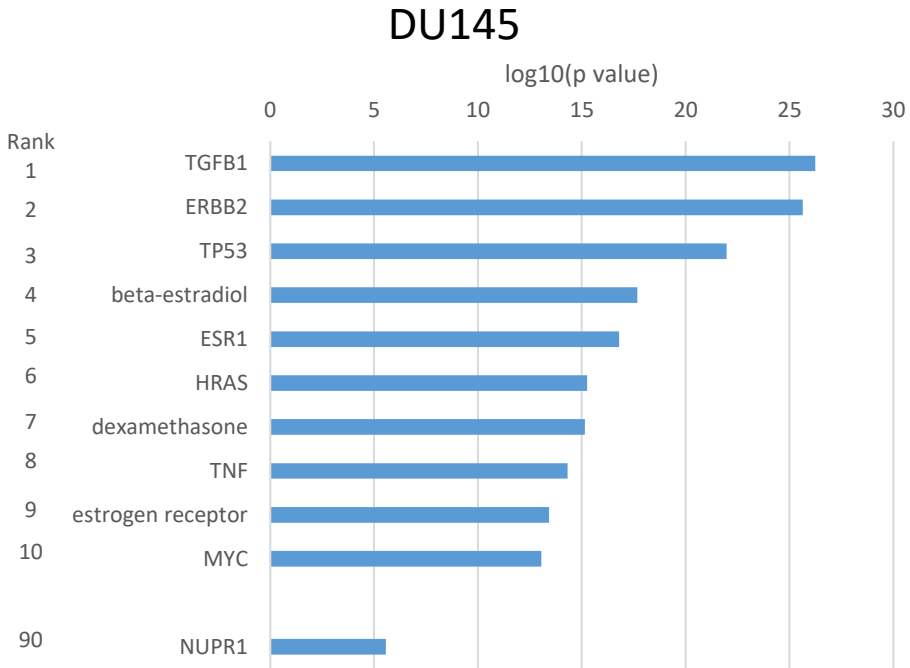


Supplementary Figure 3

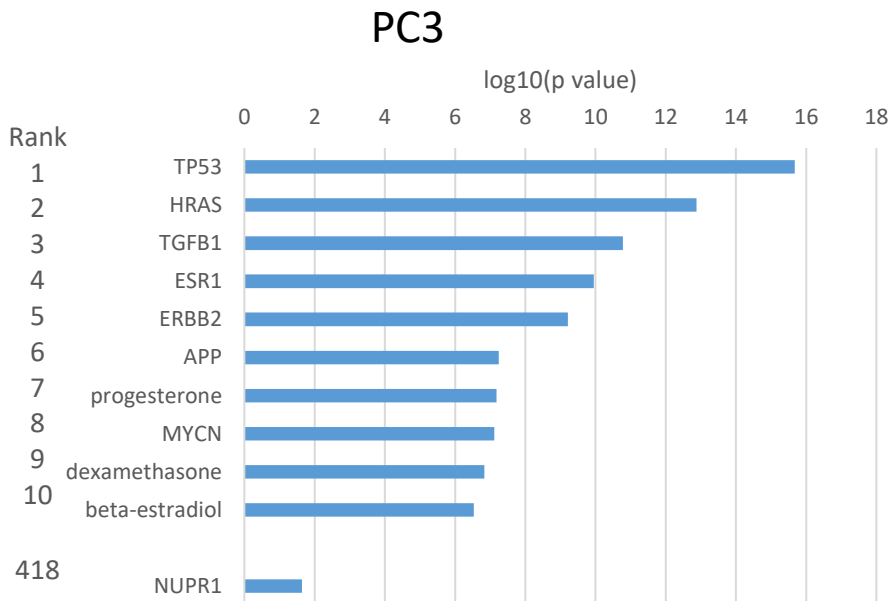


Supplementary Figure 4

A

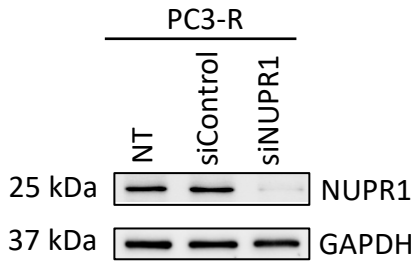


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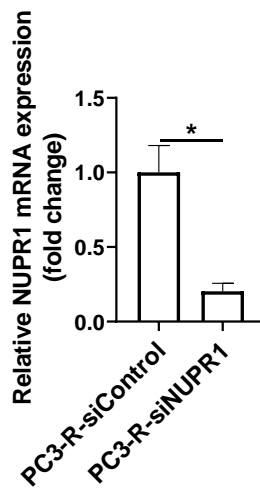


Supplementary Figure 6

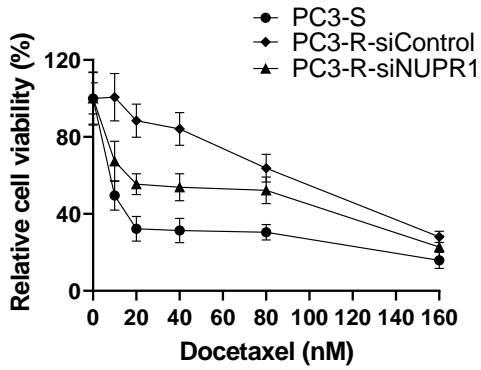
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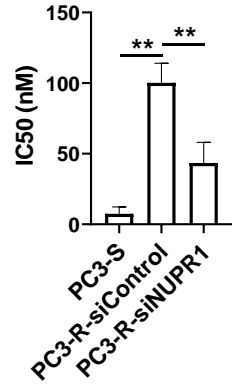
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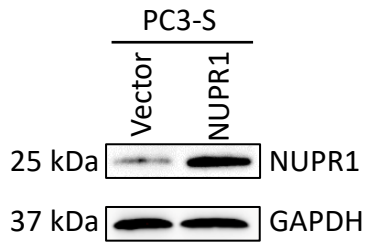
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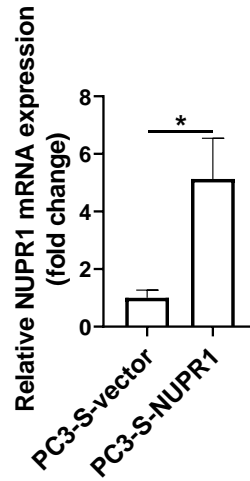
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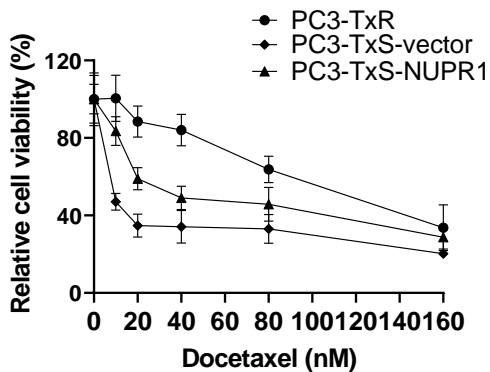
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