

Supplementary Materials

Molecular Biology of the Cell

Atanasova *et al.*

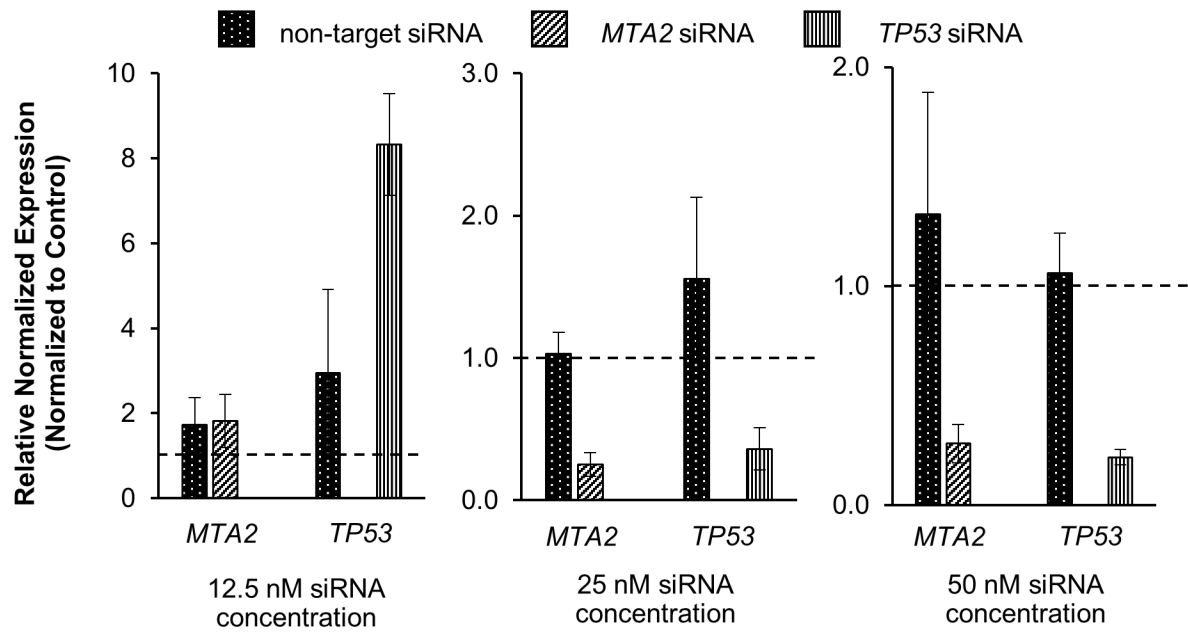
Figure S1. Knockdown efficiency validation in MCF10A cells at 72 hours post transfection with siRNAs against *TP53* and *MTA2* target genes at three different final concentrations (12.5 nM, 25 nM and 50 nM). Fold change in expression is normalized to *GAPDH* (internal control). Non-target siRNA treatment was used for comparison.

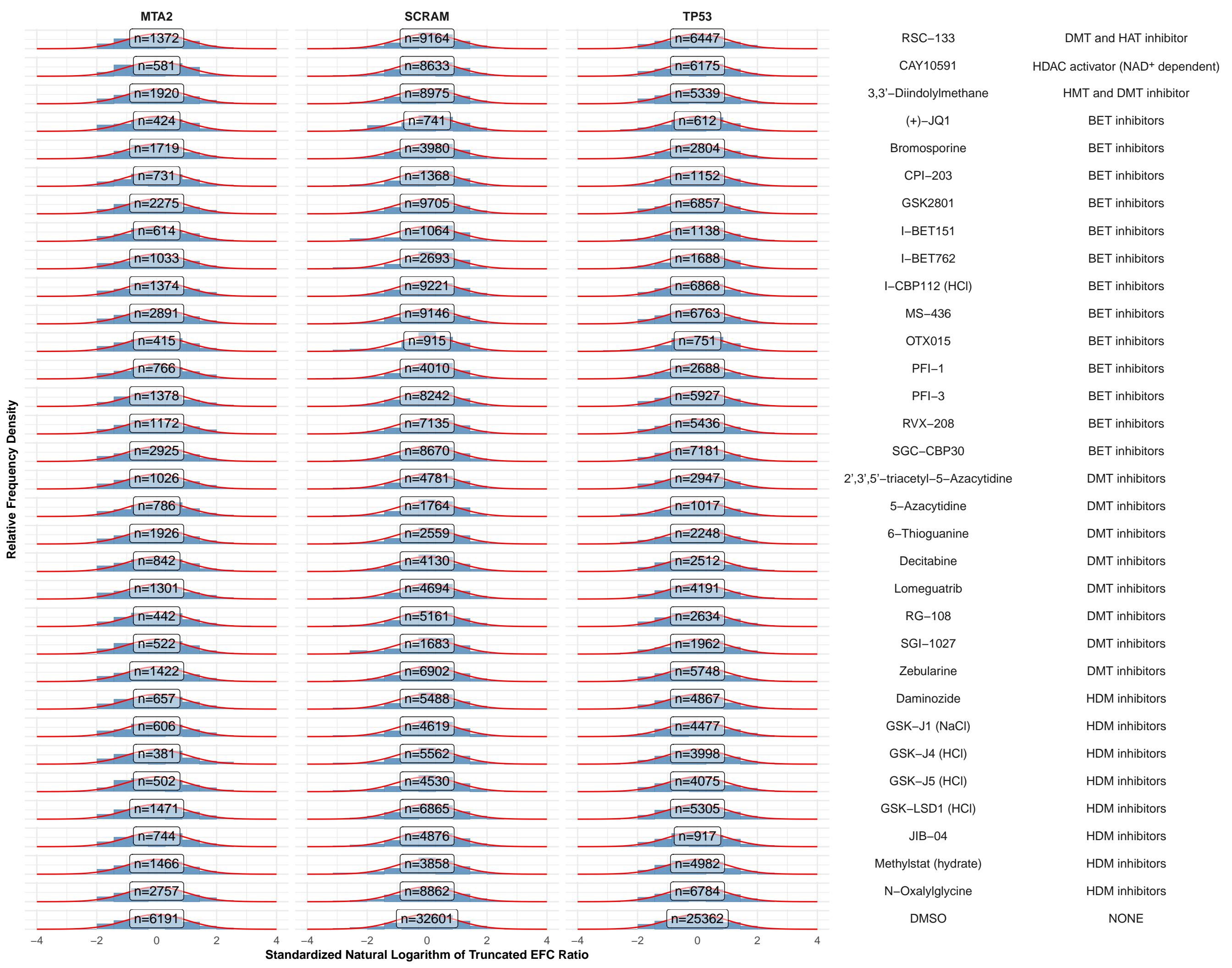
Figure S2-S5. Assessment of log-normality assumptions for observed EFC ratio values across different treatments and gene knockdown conditions. For each treatment and gene knockdown condition, the corresponding EFC ratio values (in log-scale; standardized) are summarized as histograms. A standard normal density curve is overlaid on each histogram to assess the corresponding normality assumption.

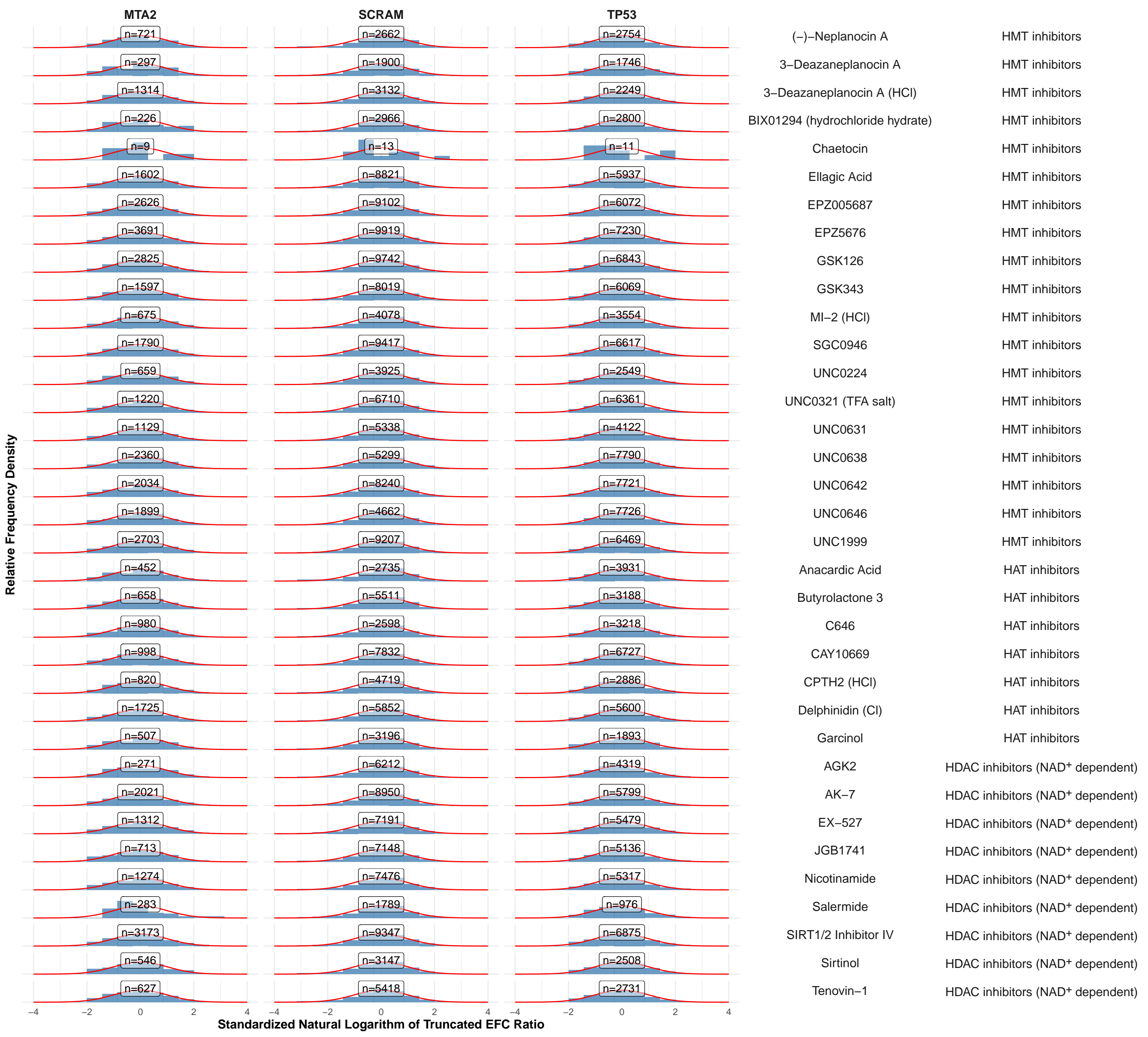
Figure S6. Dose-dependent viability of screen-selected hits by functional group in *TP53*- and *MTA2*-depleted MCF10A cells. Percent viability is normalized to the vehicle controls (DMSO) for each gene-depleted cell group. Graphs were created using GraphPad Prism 8 software with non-linear fit, variable slope.

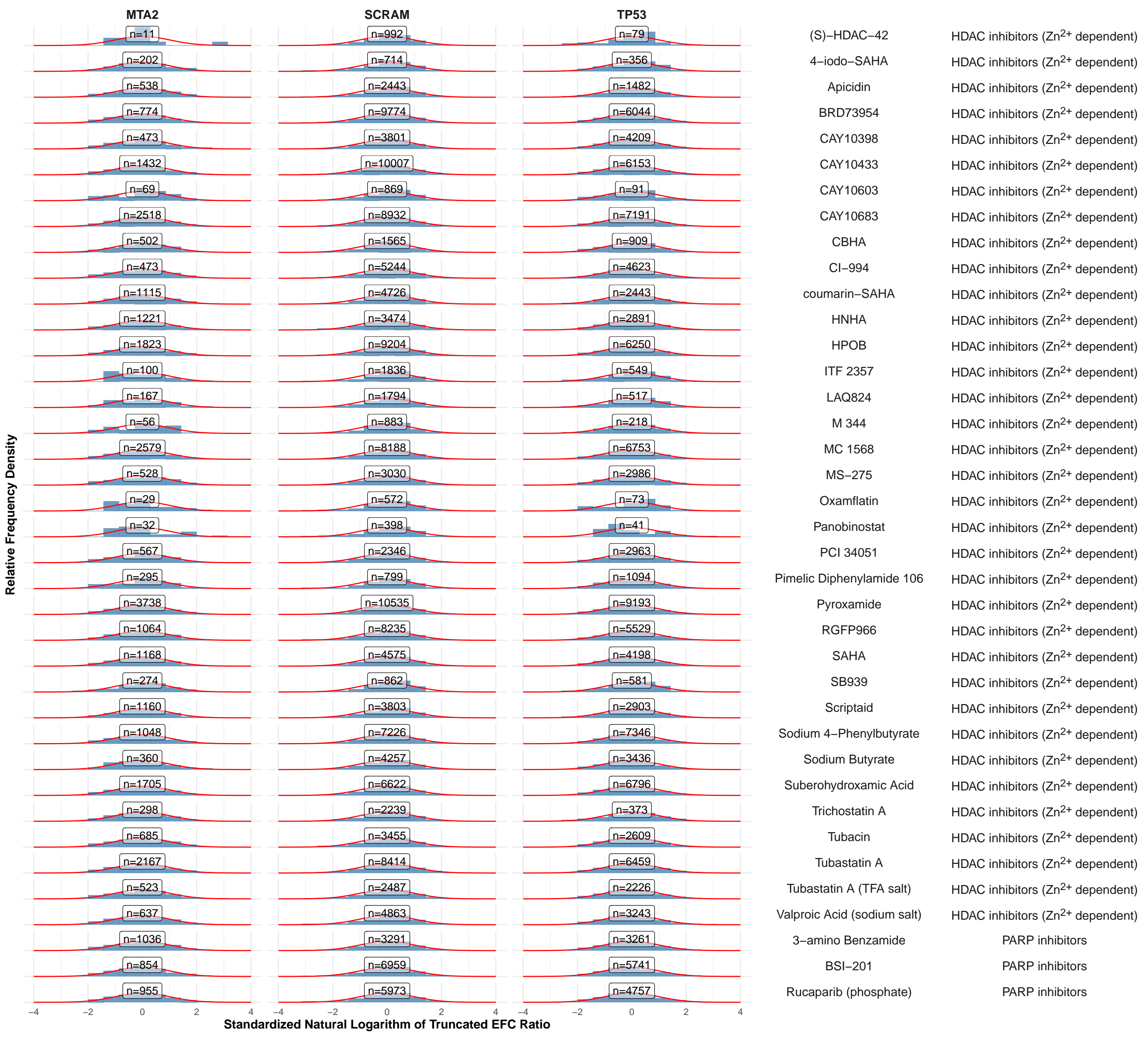
Figure S7. Dose-dependent viability of validated hits by functional group in breast and pancreas cancer cell lines with spontaneously irregular nuclei (MDA-MB-231 and PANC-1 respectively). Percent viability is normalized to the vehicle control (DMSO). Graphs were created using GraphPad Prism 8 software with non-linear fit, variable slope.

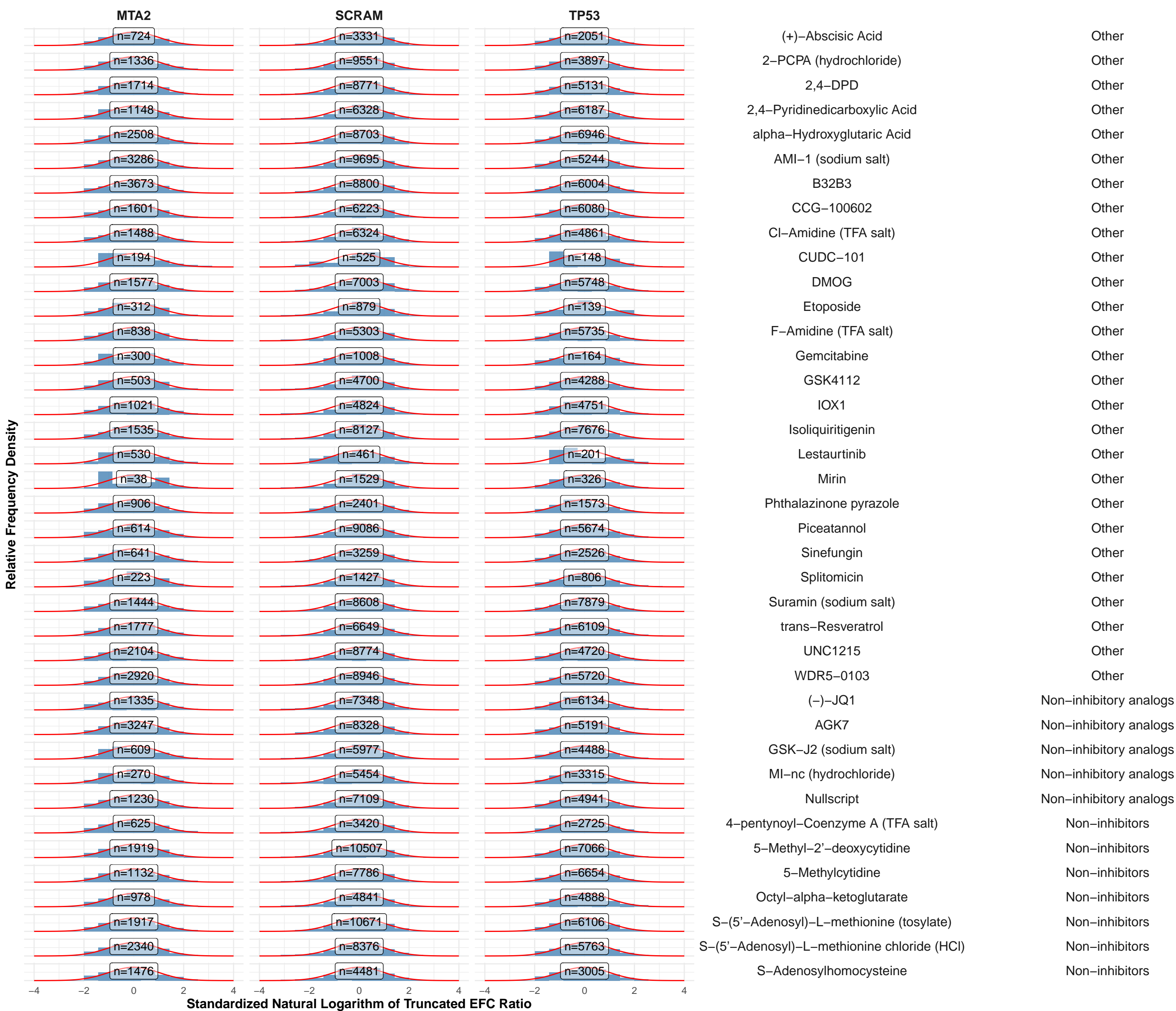
Figure S8 and S9. Counterparts of Figure 2 and Figure 3 respectively showing corresponding analyses of nuclear projected area. (see legends of Figure 2 and 3 for more details)

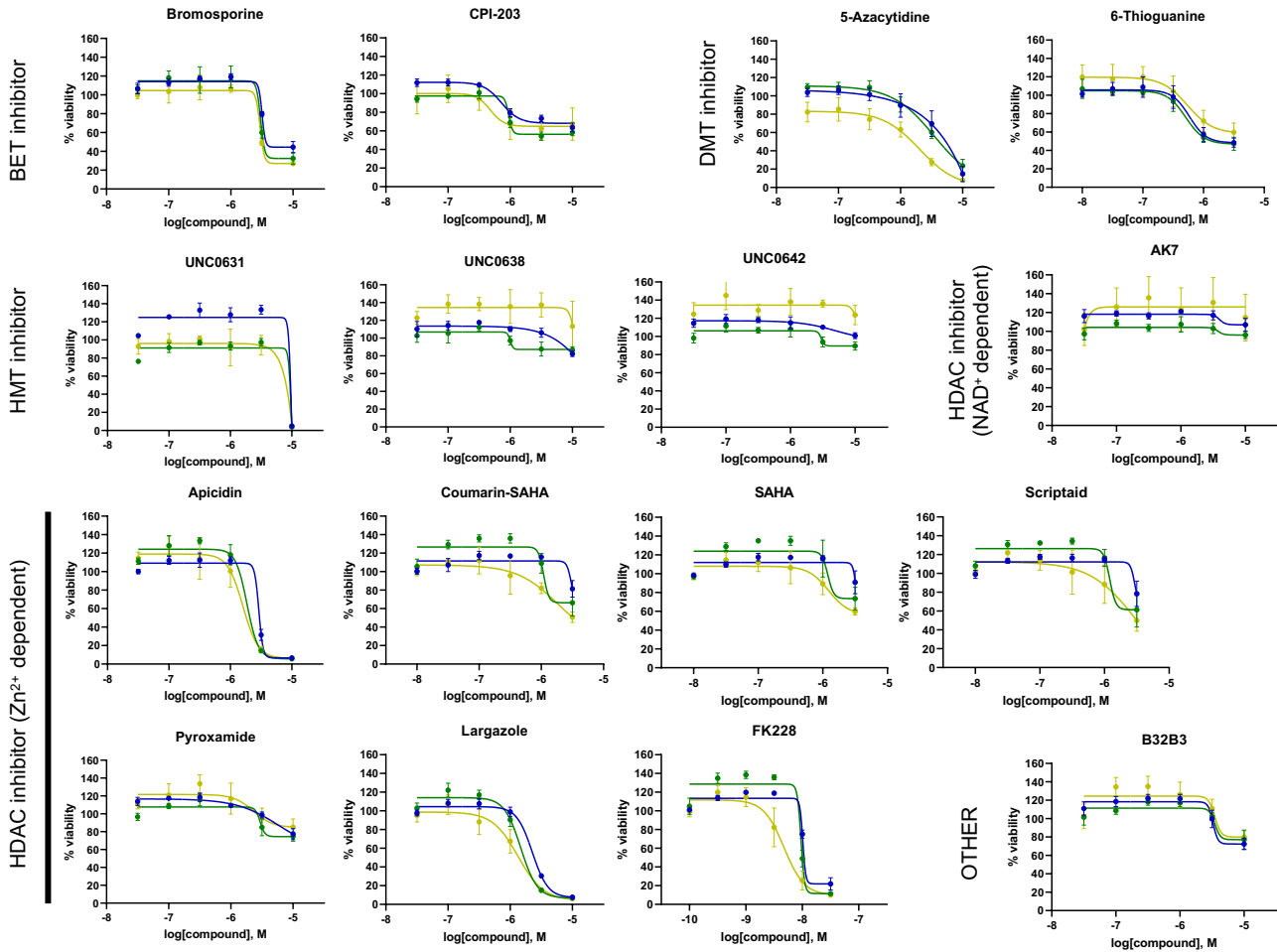






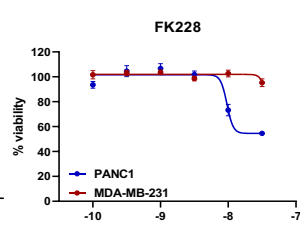
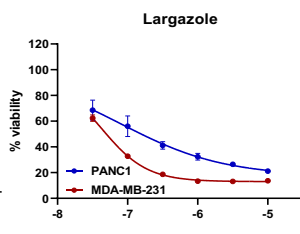
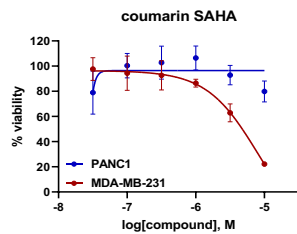
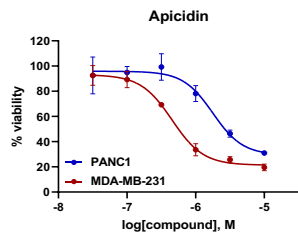




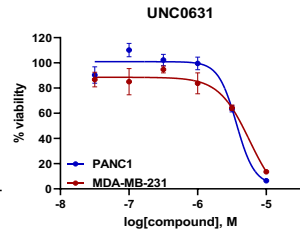
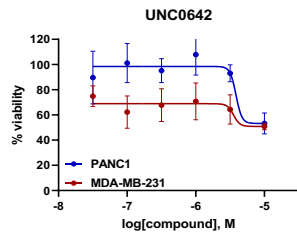
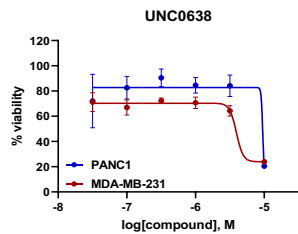


● non-target siRNA
 ■ *TP53* siRNA
 ▲ *MTA2* siRNA

HDAC inhibitor (Zn²⁺ dependent)



HMT inhibitor



DMT inhibitor

