

Title: Supplementary Data 1.

Descriptions: P5 5001-5016 staggered PCR primer sequences.

Title: Supplementary Data 2.

Descriptions: P7 7001-7096 PCR primer sequences.

Title: Supplementary Data 3.

Descriptions: i5 compound index sequences.

Title: Supplementary Data 4.

Descriptions: i7 compound index sequences.

Title: Supplementary Data 5.

Descriptions: Cell line barcode read sequences.

Title: Supplementary Data 6.

Descriptions: sgRNA barcode read sequences.

Title: Supplementary Data 7.

Descriptions: Compounds, compound targets, compound pathways, and dose ranges for QMAP-Seq.

Title: Supplementary Data 8.

Descriptions: Relative cell number values for the 83,520 cell line-sgRNA-compound-dose-replicate combinations.

Title: Supplementary Data 9.

Descriptions: AUC values for the 20,880 cell line-sgRNA-compound-replicate combinations.

Title: Supplementary Data 10.

Descriptions: AUC difference and significance values after data filtering. Statistical significance was determined using an unpaired, two-tailed t test ($n = 2$ biologically independent replicates). No adjustment was made for multiple comparisons.

Title: Supplementary Data 11.

Descriptions: Complete list of primers used for cloning and sequencing library amplification.