**Supplementary Information Guide**

Supplementary Table 1 – sgRNA targets (attached excel file)

Supplementary Table 2 – oligonucleotides used in this study (attached excel file)

Supplementary Table 3 – p-values for data from Figures 1 and 5 (multiple tabs in attached excel file)

Supplementary Table 4 – summary of GUIDE-seq data (multiple tabs in attached excel file)

Supplementary Table 5 – targeted deep sequencing amplicons and data (multiple tabs in attached excel file)

Supplementary Discussion (attached Supplementary Information file)

Supplementary Sequences – a subset of plasmids used in this study (attached Supplementary Information file)