

**Fig. S3.** Spotting assays of various  $\lambda$  phages on *galK* mutant cells carrying various 3'-end truncated sgRNA plasmids at 37°C.

 $\lambda cl^{857}$ ,  $\lambda \Delta b2$ , and  $\lambda^{cas 12f1}$  phages were spotted on soft agar with <sup>504</sup>T, <sup>504</sup>A, <sup>504</sup>AT, and  $\Delta galK$  cells. N<sub>20</sub>- N<sub>15</sub> indicates the nucleotide length of the sgRNA target recognition sequence (TRS).  $\Delta 0-\Delta 5$  denotes the number of nucleotides truncated from the 3'-end of the sgRNA.