

Supporting Information

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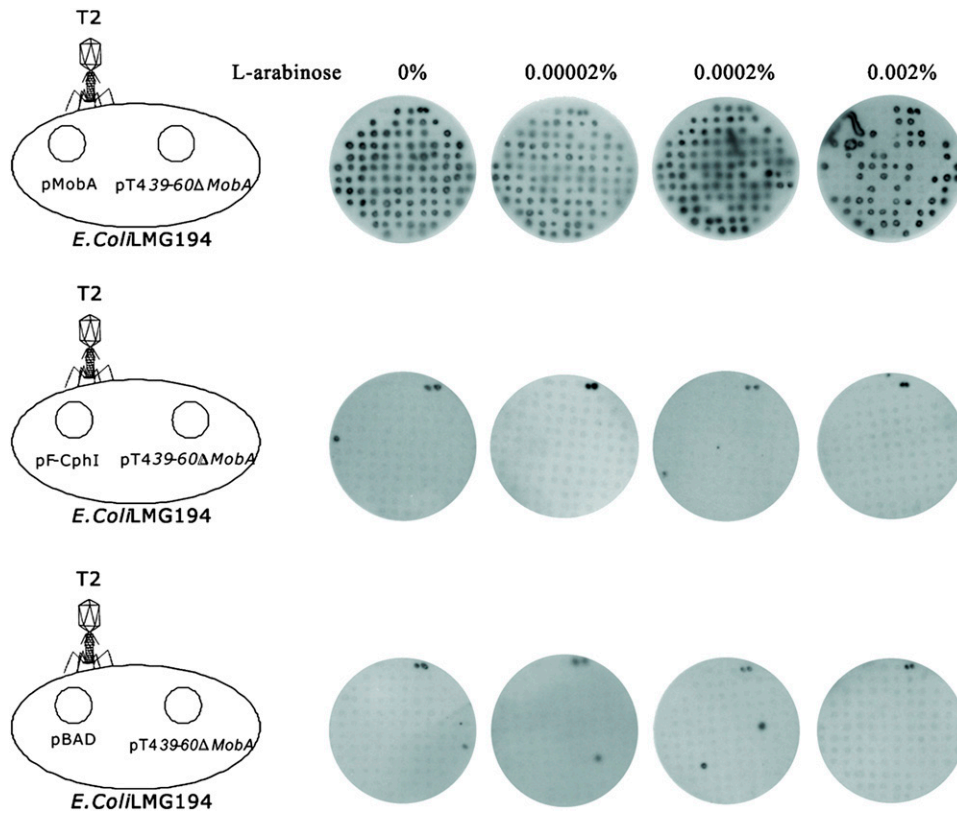


Fig. S1. MobA-dependent homing. Schematic representations of the two-plasmid homing experiment are shown on the left. *Escherichia coli* LMG194 cells harboring plasmid pT4(39–60Δ*mobA*) (donor) and different versions of expression vector pBAD were induced with various concentrations of L-arabinose and infected by phage T2. Plaques formed by progeny T2 were transferred to a fresh lawn with sterile toothpicks. Two wild-type T4 plaques were transferred at the upper right of each plate to act as positive hybridization controls. After development of clear zones, plaque lifts and DNA hybridization were carried out with oligonucleotide MobA25 to detect the presence of the bypass sequence. Quantitative data are presented in Table 1.

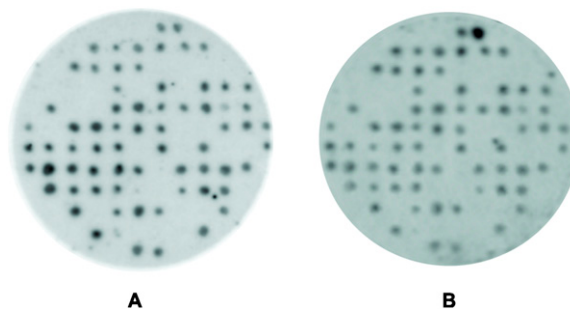


Fig. S2. Bypass sequence and truncated *mobA* gene are transferred together. *Escherichia coli* LMG194 cells harboring plasmids pT4(39–60Δ*mobA*) (donor) and pMobA were infected with T2 phage in the presence of 0.002% L-arabinose. Approximately half of the recovered T2 phages are expected to have acquired the bypass sequence (Table 1 and Fig. S1). One hundred progeny plaques were transferred to a fresh gridded lawn, with two wild-type T4 plaques transferred to the upper right to act as positive hybridization controls. After development of clear zones, plaque lifts were performed with two replica nylon membranes. Homing products were detected by hybridization using oligonucleotides MobA25 for the bypass sequence (A) and MobA24 for the 5' end of the truncated *mobA* gene (B).