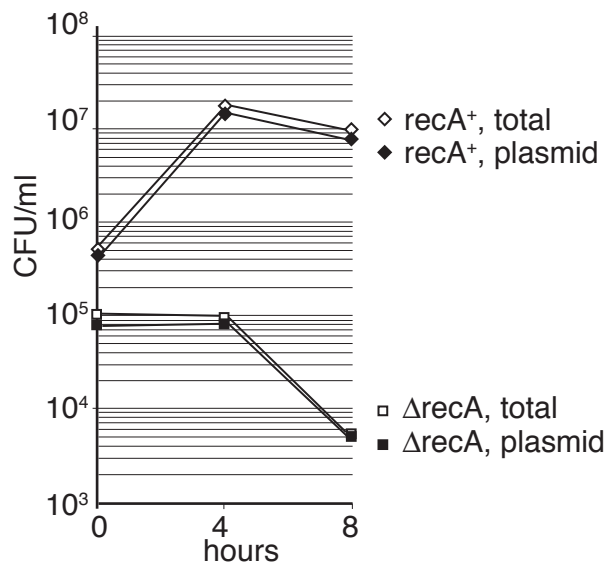
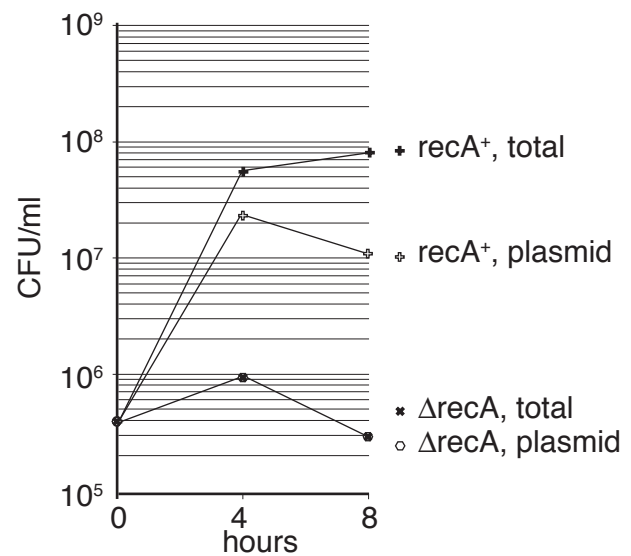


A- *sfiA lexA rep uvrD*, 37°C



B- *sfiA lexA rep uvrD*, 42°C



C- *sfiA rep uvrD recF*, 42°C

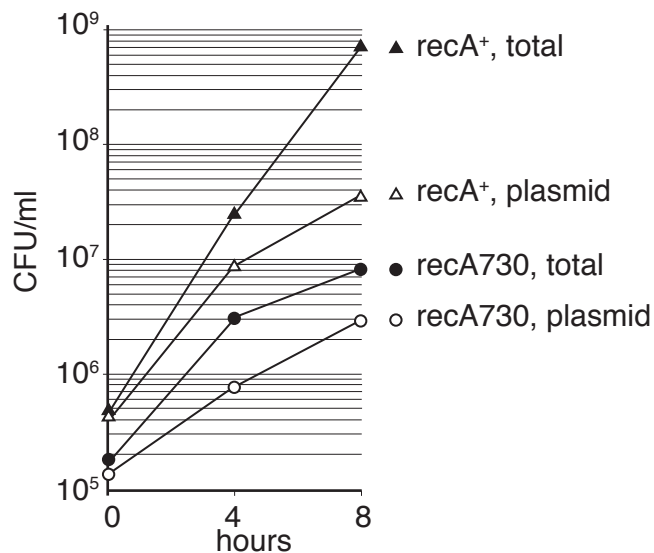


Figure S1: Kinetics of plasmid pAMrep loss in various *recA* derivatives.

Precultures of each strain containing pAMrep were grown with 100 μM IPTG and 60 μg/ml spectinomycin overnight, and diluted 1000 fold in LB medium without IPTG nor spectinomycin, to allow plasmid segregation. After 4h and 8h of incubation at the indicated temperature, cells were plated so as to count total viable cells (curves “total”), and plasmid-containing cells (curves “plasmid”). Each strain was tested at least twice, and a representative experiment is presented.

Panel A: The *sfiA lexA rep uvrD* strain (MAC 1089), as well as its $\Delta recA$ derivative (MAC1107), are not viable at 37°C. The decrease in cfu/ml of the $\Delta recA$ strain is due to the cryo-sensitivity of the *sfiA lexA uvrD* $\Delta recA$ strain (see Discussion). To limit this effect, the preculture as well as the platings for this particular strain were effected at 42°C.

Panel B: The *sfiA lexA rep uvrD* $\Delta recA$ (MAC 1107) strain is not viable at 42°C, but its *sfiA lexA rep uvrD* parent (MAC 1089) is viable (approximately 90% of the colonies obtained after 8 hours of segregation were plasmidless).

Panel C: The *sfiA rep uvrD recF recA730* strain (MAC 1159) is viable, but segregates plasmidless cells less efficiently as its *sfiA rep uvrD recF* parent (MAC 1168). After 8 hours of segregation, only 60% of the colonies were plasmidless for *recA730*, as compared to 95 % for the parent strain.