

FIG. S1 **Lineage dynamics data and simulations for $s_0 = 3.8\%$.** Each panel shows the trajectories of seeded lineages with initial fitness $s_0 = 3.8\%$ as observed in the experiment (top left) and as reproduced by simulations assuming the DFE parameters indicated above each panel.

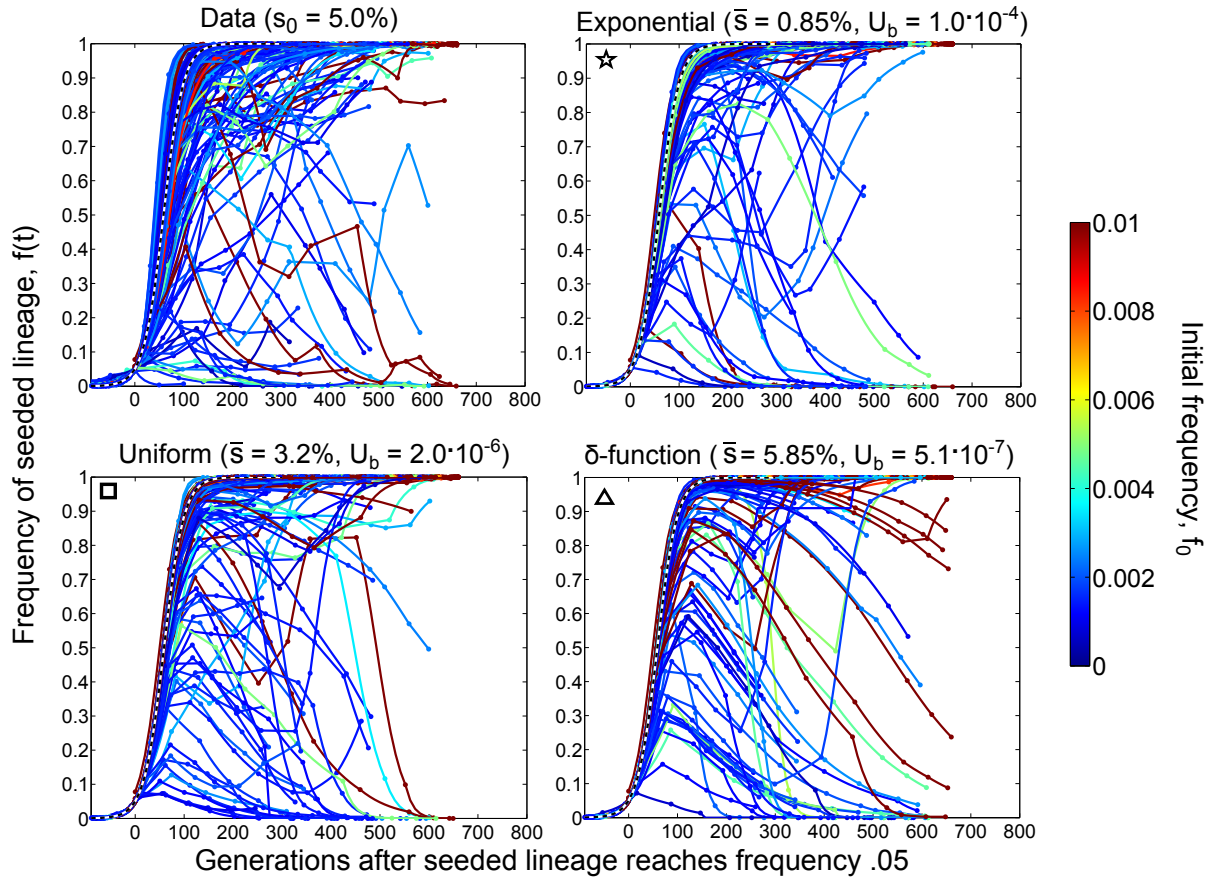


FIG. S2 **Lineage dynamics data and simulations for $s_0 = 5.0\%$.** Each panel shows the trajectories of seeded lineages with initial fitness $s_0 = 5.0\%$ as observed in the experiment (top left) and as reproduced by simulations assuming the DFE parameters indicated above each panel.

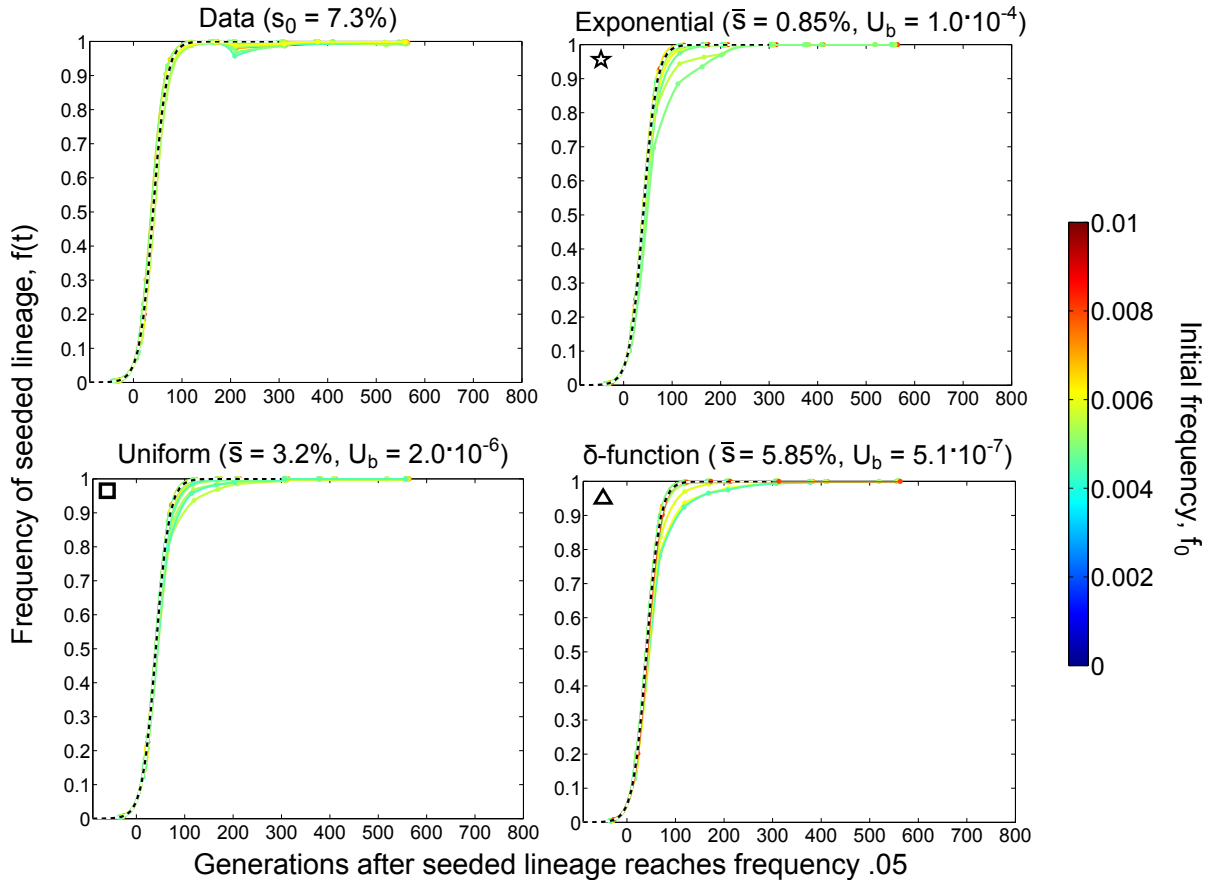


FIG. S3 **Lineage dynamics data and simulations for $s_0 = 7.3\%$.** Each panel shows the trajectories of seeded lineages with initial fitness $s_0 = 7.3\%$ as observed in the experiment (top left) and as reproduced by simulations assuming the DFE parameters indicated above each panel (which are also the ones indicated by the star, triangle and square in Fig. 4).

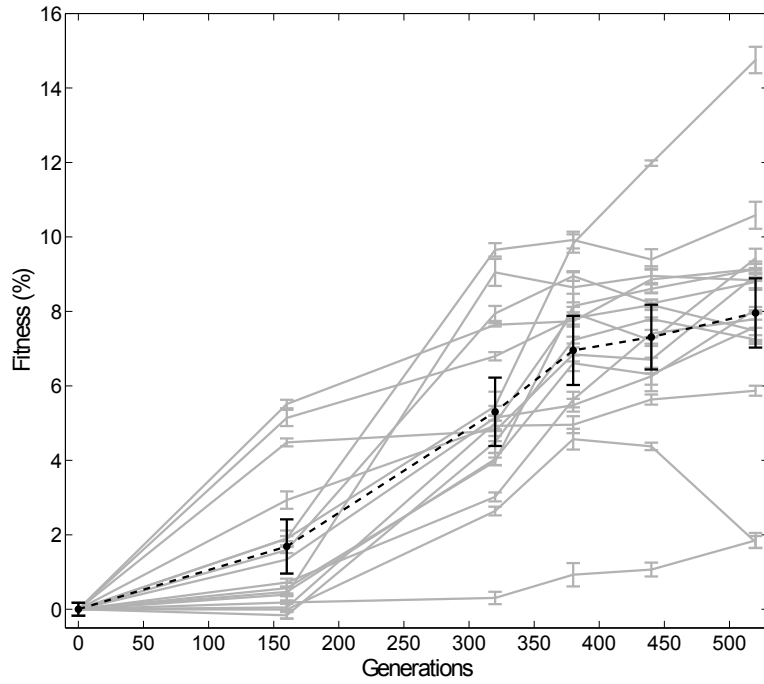


FIG. S4 **The rate of adaptation.** The fitness over time of 16 experimental control populations (grey curves) and their mean (black curve). The error bars are ± 1 s.e.m.

Table S1 Lineage dynamics data

Available for download as a .csv file at <http://www.genetics.org/lookup/suppl/doi:10.1534/genetics.113.160069/-/DC1>