

Table S4: Fitness difference between wildtype ancestor and modified strains (initial and evolved).

Strain	Estimate	<i>p</i> -value
$\Delta\phi_9/\phi_{10_{\text{wt}}}$ (initial)	-15.010000	0.0071805
$\Delta\phi_9/\phi_{10_{\text{wt}}}$ (evolved)	-9.480000	0.0132091
$\Delta\phi_9/\phi_{10_{10_{\text{deop}}}}$ (initial)	-15.610000	0.0058612
$\Delta\phi_9/\phi_{10_{10_{\text{deop}}}}$ (evolved)	-11.713333	0.0102897
$\Delta\phi_9_{8_{\Delta\text{stop}}}$ (initial)	-14.406667	0.0043853
$\Delta\phi_9_{8_{\Delta\text{stop}}}$ (evolved)	-5.045833	0.0366923
$\Delta\phi_9/\phi_{10_{8_{\Delta\text{stop}}}}$ (initial)	-17.923333	0.0029610
$\Delta\phi_9/\phi_{10_{8_{\Delta\text{stop}}}}$ (evolved)	-7.455833	0.0263225