



**Fig S5. Effects of background selection on the accumulation of compensatory mutations (two-locus model).** The graph displays the fixation time estimated from the two-locus models with a coefficient of dominance of the double heterozygotes ( $k_c$ ) set to 0 (left) or 1 (right), and under different scenarios of background selection, 'linear BG effects' (yellow) or 'curved BG effects' (red), which we compared to a scenario without background selection scenario (blue) (see methods for details on the implementation of background selection effects in our simulations).  $N = 1,000$ ,  $\mu = 10^{-5}$ ,  $h_c = 0.5$ ,  $s_c = 10^{-2}$ ,  $r = 0.5$ . 10,000 iterations