Figure S2: Increasing the Hill coefficient leads to slower response times unless binding strength is weak. The x-axis shows the binding strength in the resident allele, in units of $p_{\text{max}}/K$, and the y-axis shows the ratio of response times for a heterozygote in which one allele has a Hill coefficient $n = 1$ and the other has a Hill coefficient $n = 2$, to a homozygote with Hill coefficient $n = 1$. Below the gray dashed line, mutations result in increased response time in the mutant compared to the resident allele. Weak binding occurs when $p_{\text{max}}/K \geq 10^0$. Response times are calculated by numerically integrating Eq. 1 from zero protein concentration to 99% of the equilibrium. The optimal binding strength in these graphs is $p_{\text{max}}/K = 1250$ corresponding to a background transcription rate $k_1/k_0 = 10^{-3}$. 