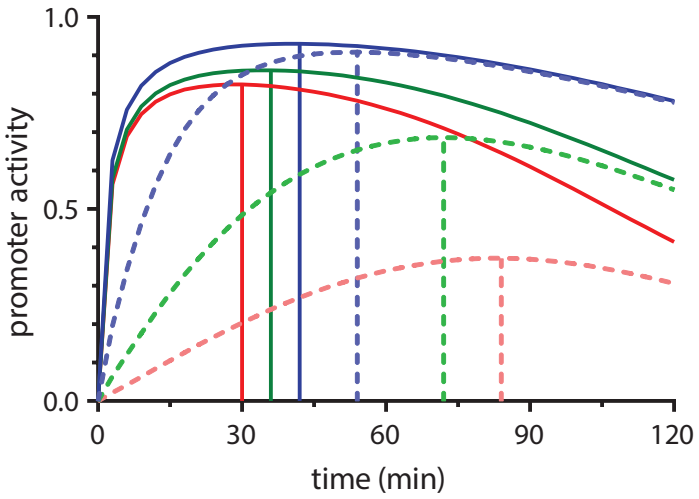
Figure S8



operator-bound LexA cleavage:

	permitted			prohibited	
K_d (nM)		k_{off} (min^{-1})	k_{on} (nM^{-1} min^{-1})	k_{off} (min^{-1})	k_{on} (nM^{-1} min^{-1})
100	—	0.1	0.001	- -	0.1	0.001
30	—	0.03	0.001	- -	0.03	0.001
10	—	0.01	0.001	- -	0.01	0.001

Figure S8. Effect of RecA*-mediated cleavage of the operator-bound form of LexA on the kinetic model of LexA occupancy of SOS promoters. Data are shown simulating a high DNA damage dose, as in Figure 7B, but here only three promoters are modeled, all with SLOW LexA-operator binding kinetics. Colors indicate equilibrium affinities. Traces are shown for a model where RecA*-mediated cleavage of the operator-bound form of LexA is permitted (solid lines) and a model where cleavage of the operator-bound form of LexA is prohibited (dotted lines). The former was accomplished by adding the reaction schemes, AB + PR ⇌ ABPR and ABPR ⇌ AB+ P, to the model and setting the rate constants equal to that of the free LexA cleavage reaction (see Table S4, schemes 3 and 4). The simulation shows that permitting the operator-bound form of LexA to be cleaved reduces the timing differences between promoters.