

Supplementary Table 6. Parameters used for modeling Pol II accumulation downstream polyadenylation site.

Parameter	Value/Range
Promoter-clearance rate (k_1)	0.01 – 0.4 molecules/s
Elongation rate (k_2)	4 kb/min
Elongation after polyA site (k_4)	0.5-4 kb/min
Mean Termination Pause Time (τ_1)	1-7s
Premature termination rate (k_5)	0 or 0.005 molecules/s
Gene Length	2000 – 30000 nt
Distance between pause sites	500 nt
Gene Body Pause rate (k_3)	1.5 molecules/s
Mean Pause time Gene Body (τ_2)	1.5 s
Initiation rate (binding to promoter)	1 molecules/s
Promoter Length	200 nt
Survive time rate at release region	$0.2 \times 1000 / k_3$ s
Max. Nr. Molecules	2 molecules/20nt
Simulation Time	$10 \times \text{GeneLength} / \text{Elongation rate}$ s
Number of experiments	100