Table I Estimated rate constants used in the model of IL-4 expression

Experimental quantification	Parameter estimates (mean)	Parameter estimates (error)
mRNA level (rel. to HPRT)	160-fold/cell	± 60-fold/cell (s.d.)
mRNA average lifetime, τ_R	90 min	< 120 min
Protein production rate	0.75×10^6 protein/h/cell	$\pm 0.17 \times 10^6$ protein/h/cell (s.d.)
Protein average lifetime, τ_P	45 min	[35, 60] min (95% CI)
Experimentally estimated rate constants		
Transcription rate, k_R	40 mRNAs/min[a]	± 15 mRNAs/min[a] (s.d.)
Translation rate, k_P	4 proteins/mRNA/min[a]	± 0.9 proteins/mRNA/min[a] (s.d.)
mRNA degradation rate, d_R	0.7/h	> 0.5/h
Protein secretion rate, d_P	1.4/h	[1, 1.7]/h (95% CI)
Stochastic parameters derived from model fitting		
Chromatin opening rate, k_G		
1-week-differentiated cells	0.042/h	[0.030, 0.054]/h (95% CI)
2-week-differentiated cells	0.23/h	[0.20, 0.27]/h (95% CI)
3-week-differentiated cells	0.31/h	[0.24, 0.4]/h (95% CI)
Chromatin closing rate, d_G	0.015/h	< 0.06/h (95% CI)
Mean TF occupancy, $<t_A>$	1.3 h	[1.2, 1.4] h (95% CI)

[a]Assuming 20 HPRT mRNAs per cell.
CI, confidence interval (estimated through profile-likelihood method).