Supporting information for Kholodenko *et al.* (2002) *Proc. Natl. Acad. Sci. USA*, 10.1073/pnas.192442699

Table 2. Rate equations and parameter values of the gene network model

Rate equation	Parameter values
$V_1^{synth} = \frac{V_1^s \cdot \left(1 + A_{14} \cdot \left([mRNA_4]/K_{14}^a\right)^{n_{14}}\right)}{\left(1 + \left([mRNA_4]/K_{14}^a\right)^{n_{14}}\right) \cdot \left(1 + \left([mRNA_2]/K_{12}^I\right)^{n_{12}}\right)}$	$V^s_1 = 5$; $A_{14} = 4$; $K^a_{14} = 1.6$; $n_{14} = 2$; $K^I_{12} = 0.5$; $n_{12} = 1$
$V_2^{synth} = \frac{V_2^s \cdot \left(1 + A_{24} \cdot \left([mRNA_4]/K_{24}^a\right)^{n_{24}}\right)}{1 + \left([mRNA_4]/K_{24}^a\right)^{n_{24}}}$	$V^s_2 = 3.5$; $A_{24} = 4$; $K^a_{24} = 1.6$; $n_{24} = 2$
$V_3^{synth} = \frac{V_3^s \cdot \left(1 + A_{32} \cdot \left([mRNA_2]/K_{32}^a\right)^{n_{32}}\right)}{\left(1 + \left([mRNA_2]/K_{32}^a\right)^{n_{32}}\right) \cdot \left(1 + \left([mRNA_1]/K_{31}^I\right)^{n_{31}}\right)}$	$V^s_3 = 3$; $A_{32} = 5$; $K^a_{32} = 1.5$; $n_{32} = 2$; $K^I_{31} = 0.7$; $n_{31} = 1$
$V_4^{synth} = \frac{V_4^s \cdot \left(1 + A_{43} \cdot \left([mRNA_3]/K_{43}^a\right)^{n_{43}}\right)}{1 + \left([mRNA_3]/K_{43}^a\right)^{n_{43}}}$	$V^s_4 = 4$; $A_{43} = 2$; $K^a_{43} = 0.15$; $n_{43} = 2$
$V_1^{degr} = V_1^d \cdot [mRNA_1]/\left(K_1^d + [mRNA_1]\right)$	$V^d_1 = 200$; $K^d_1 = 30$
$V_2^{degr} = V_2^d \cdot [mRNA_2]/\left(K_2^d + [mRNA_2]\right)$	$V^d_2 = 500$; $K^d_2 = 60$
$V_3^{degr} = V_3^d \cdot [mRNA_3]/\left(K_3^d + [mRNA_3]\right)$	$V^d_3 = 150$; $K^d_3 = 10$
$V_4^{degr} = V_4^d \cdot [mRNA_4]/\left(K_4^d + [mRNA_4]\right)$	$V^d_4 = 500$; $K^d_4 = 50$

Concentrations ([mRNA$_i$], $i = 1 - 4$) and Michaelis constants (K^a_i, K^I_i; K^d_i) are given in nM. Maximal enzyme rates (V^s_i, V^d_i) are expressed in nM·s^{-1}. Kinetic equations comprising the model are: $d[\text{mRNA}_i]/dt = V_i^{synth} - V_i^{degr}$.