Captions

Figure 1:

The value u of the fixed point solution as a function of the signal concentration v in our model. Solid line indicates the stable solution, while the dotted line indicates the unstable one.

Figure 2:

The stationary states of u_i in model I are plotted against the total cell number N. At the interval $N_1^* \leq N \leq N_2^*$, two different cell states coexist. The parameter value c_1 is set at 0.005.

Figure 3:

The ratio of the number of each cell type ($\times$ for $N_{(1)}$ and $\Box$ for $N_{(2)}$) plotted against the total cell number N, for model I. The initial values of u_i are chosen randomly from the interval of $u_i \in [0, 1]$. The parameter value is $c_1 = 0.005$.

Figure 4:

The fixed point values of u_i in model II are plotted against the total cell number N. At each N, 100 initial conditions are chosen. The expression levels of u_i for a single cluster ($+$) and two-cluster solutions ($\circ$) are plotted as a function of N. The value for two-cluster solutions is the average over initial conditions. The parameter values are set at $K_v = 2.0$, $\beta = 2.0$, $c_2 = 0.1$.

Figure 5:

The stationary state of a single-cluster solution for model II. Solid line indicates u_i of the stable fixed solution, while the broken line denotes that of the unstable one. The parameters are $K_v = 2.0$, $\beta = 2.0$, $c_2 = 0.1$.

Figure 6: