

## Supplementary Text S2

The values of kinetic parameters used in Figures 3 and 4 are given in the following list.

*Synthesis-related rates:*

miR193a transcription rate:  $k_4 = 0.3 \text{ molecule} \cdot \text{sec}^{-1}$ ;

c-KIT mRNA transcription rate:  $k_6 = 0.1 \text{ molecule} \cdot \text{sec}^{-1}$ ;

E2F6 protein translation rate:  $k_3 = 0.03 \text{ molecule} \cdot \text{sec}^{-1}$ ;

- E2F6 mRNA transcription rate:  $k_5$ ;
  - Inhibition strength of miR193a expression:  $K_4$ .
- } **control/ bifurcation parameters**

*Degradation rates:*

miR193a degradation rate:  $\delta_m = 0.0001 \text{ sec}^{-1}$ ;

E2F6 mRNA degradation rate:  $\delta_e = 0.0003 \text{ sec}^{-1}$ ;

c-KIT mRNA degradation rate:  $\delta_c = 0.0003 \text{ sec}^{-1}$ ;

miR193a–E2F6 mRNA complex degradation rate:  $\delta_{em} = 0.003 \text{ sec}^{-1}$ ;

miR193a–c-KIT mRNA complex degradation rate:  $\delta_{mc} = 0.003 \text{ sec}^{-1}$ ;

E2F6 protein degradation rate:  $\delta_p = 0.0001 \text{ sec}^{-1}$ .

*Complexes – binding and unbinding rates:*

miR193a & E2F6 mRNA association rate:  $k_1 = 0.0003 \text{ sec}^{-1} \text{ molecule}^{-1}$ ;

miR193a & c-KIT mRNA association rate:  $k_2 = 0.0003 \text{ sec}^{-1} \text{ molecule}^{-1}$ ;

miR193a–E2F6 mRNA complex dissociation rate:  $k_{m1} = 0.0001 \text{ sec}^{-1}$ ;

miR193a–c-KIT mRNA complex dissociation rate:  $k_{m2} = 0.0001 \text{ sec}^{-1}$ .