|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter | WT | Bcd1.0 | *stau-* | Source |
| Hb degradation rate | $$β$$ | $$0.1 min^{-1}$$ | (Papatsenko and Levine, 2008) |
| Hb diffusion rate | $$D$$ | $$12 μm^{2}/min $$ | (Papatsenko and Levine, 2008) |
| Bcd decay rate | $$ω\_{0}$$ | $$0.01 min^{-1}$$ | (Little et al., 2011) |
| Hill coefficient for Bcd | $$n\_{b}$$ | $$5$$ | (Driever et al., 1989; Gregor et al., 2007a) |
| Hill coefficient for Hb | $$n\_{h}$$ | $$3$$ | (Treisman and Desplan, 1989) |
| Bcd gradient amplitude | $$b\_{m}$$ | 2 | $$1$$ | $$0.70$$ | Measured |
| Bcd length constant | $$λ$$ | $$0.15 EL$$ | $$0.18 EL$$ |
| Amplitude of initial Hb | $$h\_{m}$$ | 1 | Fixed |
| Steepness of initial Hb boundary | $$k\_{x}$$ | $$16EL^{-1}$$ |
| Bcd regulation strength | $$α\_{b}$$ | $$0.23 min^{-1}$$ | [0.1~0.5] |
|  “Threshold” for Bcd | $$b\_{0}$$ | $$0.10$$ | [0.01~0.31] |
| Hb regulation strength | $$α\_{h}$$ | $$0.27 min^{-1}$$ | [0.1~0.5] |
| “Threshold” for Hb | $$h\_{0}$$ | $$1.20$$ | [1~2] |
| Time triggering Bcd decay | $$t\_{0}$$ | $$4.59 min$$ | [-5~10] |
| Simulation time offset of the beginning of nc14 | $$t\_{offset}$$ | $$-10 min$$ | [-20~20] |
| Boundary position of initial Hb distribution | $$x\_{0}$$ | $$0.30 EL$$ | $$\rightarrow \infty $$(Fixed) | [0.3~0.5] |