



**Figure S8** Models for stochastic reporter expression in AIZ neurons. (A) A model with bistable gene regulation system. In this model, double negative feedback loop can be formed by hypothesizing a miRNA that is encoded in the promoter region and interfere with the expression of a transcription repressor. (B) A model by chromatin conformation switching. In this model, the conformation of chromatin switches between heterochromatin and euchromatin, while the selected state is fixed after development. Because each cell has two transgenes on the homologous chromosomes, intermediate expression state should appear. (C) A model by a constant degradation mechanism. If the level of reporter transcription is fixed during development, the rate of degradation of transcripts or proteins can define the minimum level of expression induction required for expression of the reporter.