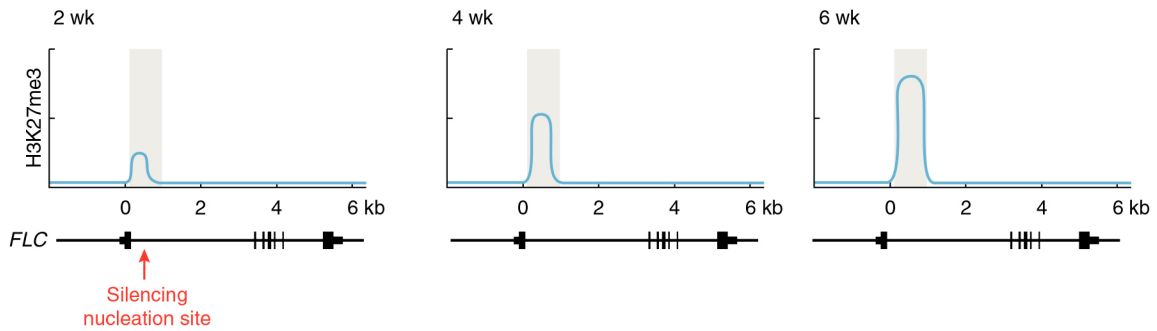
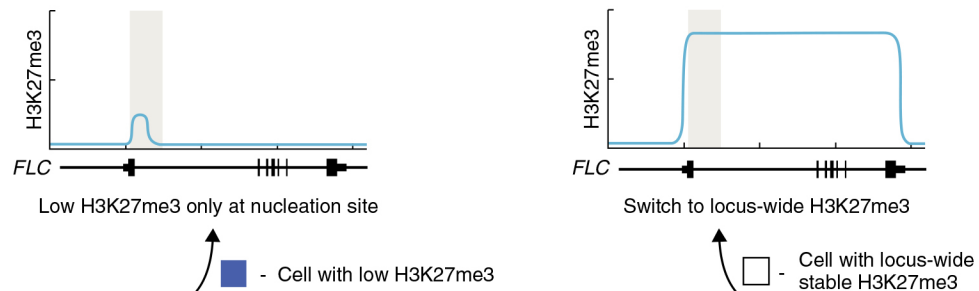


A Duration of cold period



B Patterns of H3K27me3



C Degree of stochastic switching to stable locus-wide H3K27me3

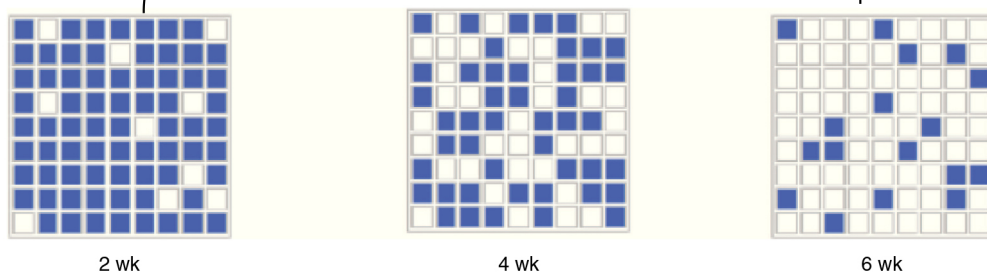


Figure 3. Stochastic switching mechanism underlies the quantitative nature of vernalization. (A) During cold, H3K27me3 quantitatively accumulates in the nucleation region of the *FLC* gene, indicated schematically below each graph, with increasing weeks of cold (*top* row of figure). (B) After cold, the nucleated H3K27me3 causes some cells to switch to a silenced state with high levels of H3K27me3 blanketing the gene. This epigenetic switch is cell-autonomous. (C) The quantitative nature of the vernalization response is due to an increasing number of cells switching to a silenced state after increasing cold exposure. Each cell is indicated by a square. (Figure courtesy of Dr. Jie Song.)