

## SUPPLEMENTAL FIGURE LEGENDS

**Figure S1.** Dot blot analysis showing the specificity of antibodies used in this study. Peptide concentration is shown on the left.

**Figure S2.** The H3K4me distribution patterns determined here are highly consistent with results at three loci reported in a recent locus-specific study of H3K4me2 and H3K4me3 [38]. The *NAP* and *WRKY70* genes were reported to contain H3K4me2 and H3K4me3, the *XTH33* gene was reported to contain H3K4me2 but not H3K4me3.

**Figure S3.** Real-time PCR validation of H3K4me ChIP-chip results in two regions on chromosome 1. ChIP-chip results are shown on top (filled red boxes represent regions amplified by real-time PCR). Real-time PCR results are shown at the bottom. y-axis: fold of enrichment calculated using regions 4 as internal standard (see *Materials and Methods* for details).

**Figure S4.** Length distribution of H3K27me3 target genes. Only “isolated genes” are included in this analysis to avoid ambiguity. x-axis: gene length (in 200-bp bins). y-axis: percentage of all genes (black) or H3K27me3 target genes (red) with corresponding length.

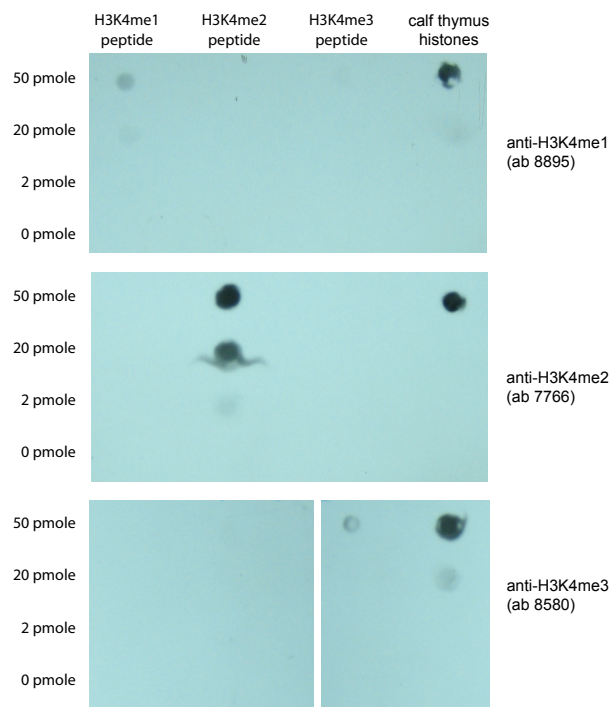


Figure S1

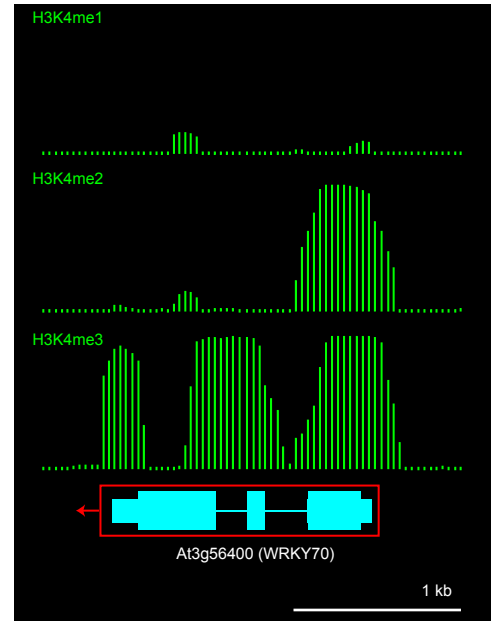
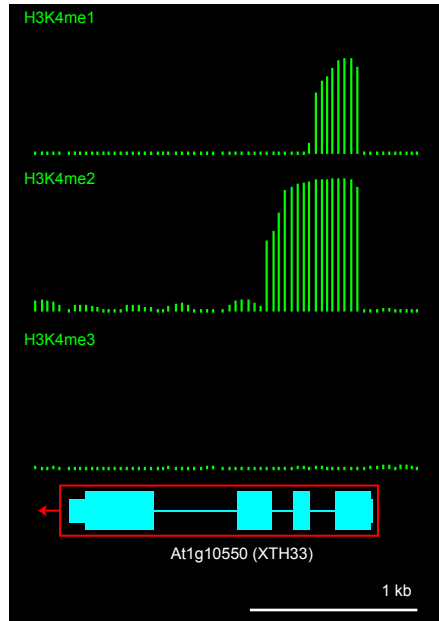
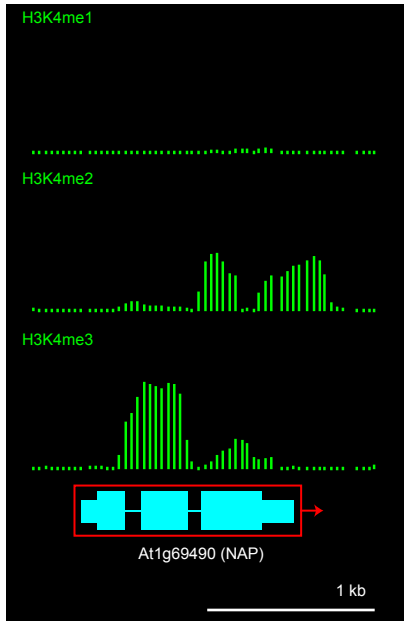


Figure S2

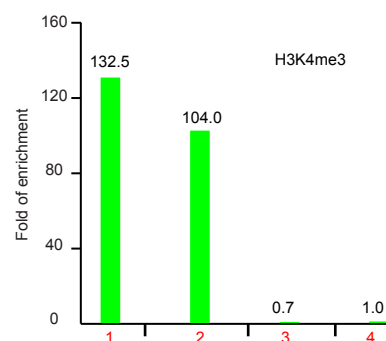
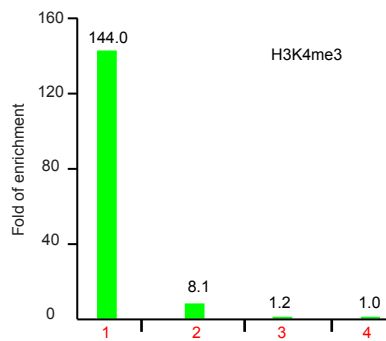
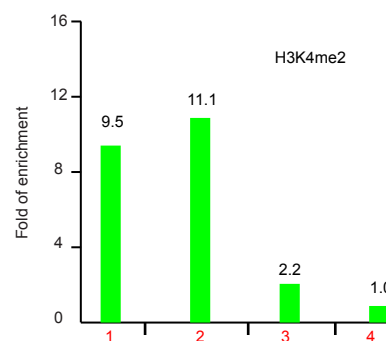
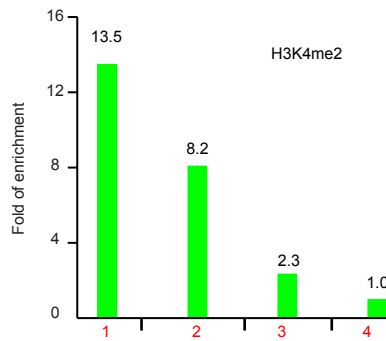
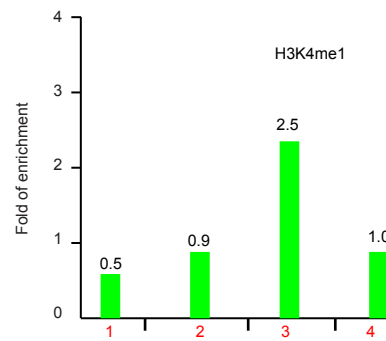
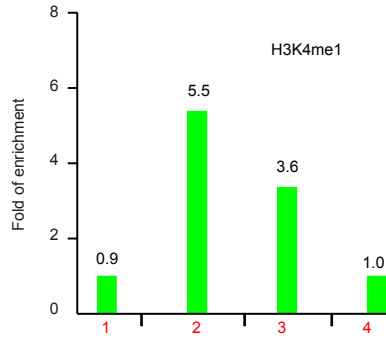
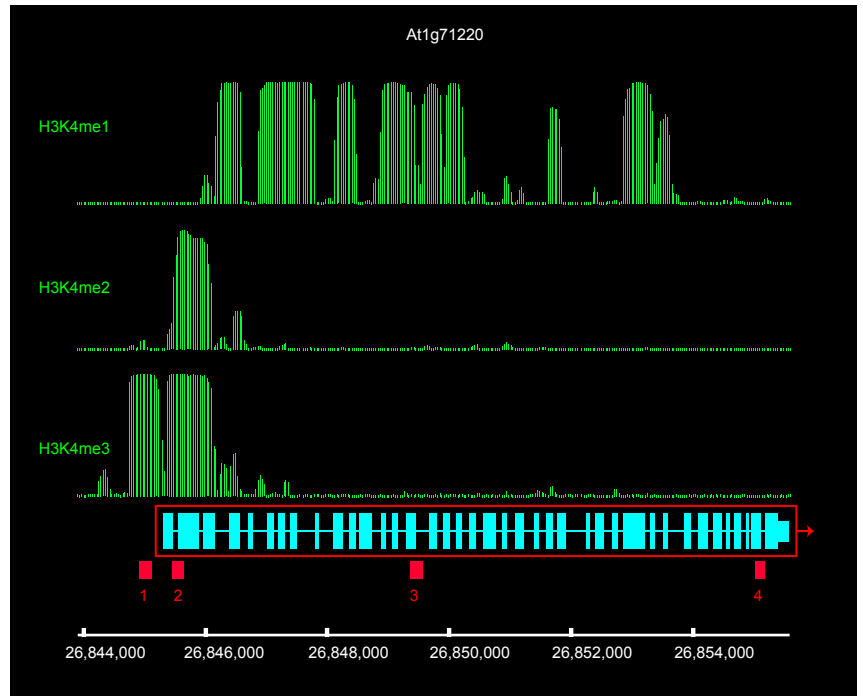
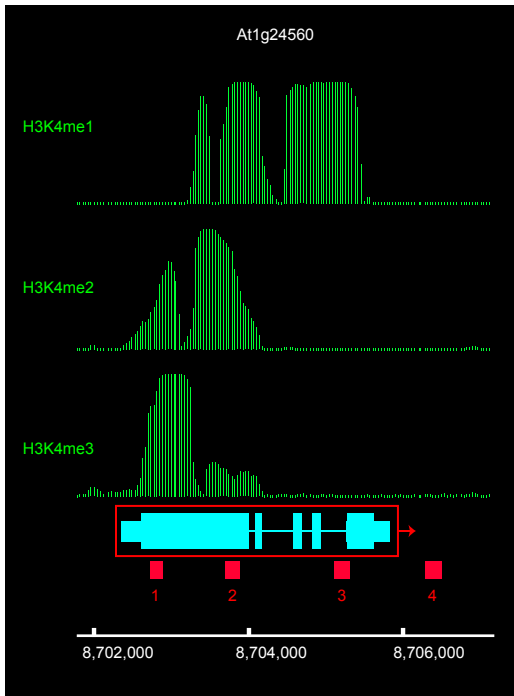


Figure S3

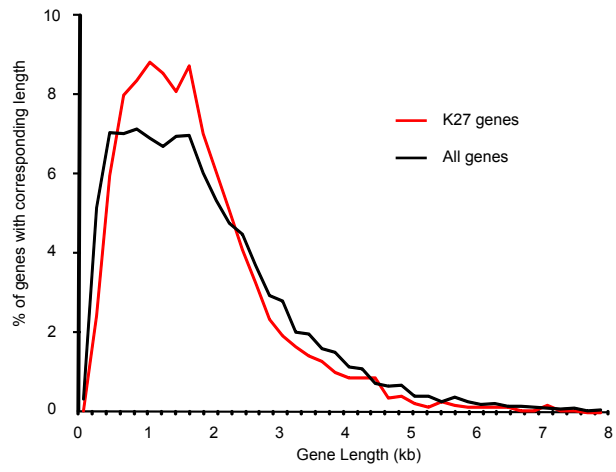


Figure S4

Table S1. PCR primers used for real-time PCR validation of ChIP-chip results.

Gene	Locus	Forward Primer	Reverse Primer
At1g24560	1	GGAGCTAATAGCGGAGCTTG	TCCTTCAATGCTTCATCACG
At1g24560	2	GCACAGAGTTTGGTGAAGAG	CACCATCCCTCAAACCATTG
At1g24560	3	GATTGGGAATTGCACTGAGG	ATTGCTTGCTTTGCCTCTTC
At1g24560	4	ACCAAGTCTAGCATGGGAGAGA	TCGAGGGTTTGATTTACATGG
At1g71220	1	TGGCTCTGTTTCACATCTCG	AGATCATGCGAAGGAATGCT
At1g71220	2	TGAGGCTGGGTAATGCTTCT	AATCGGAATCATCTCCATCG
At1g71220	3	TGAAGCAAGCTCCATGTTTG	GTGAACGTCGATGCAGATCA
At1g71220	4	TGTGAATCCTGGTGTGGAAA	TGCAGAAGAACACCGCATTA