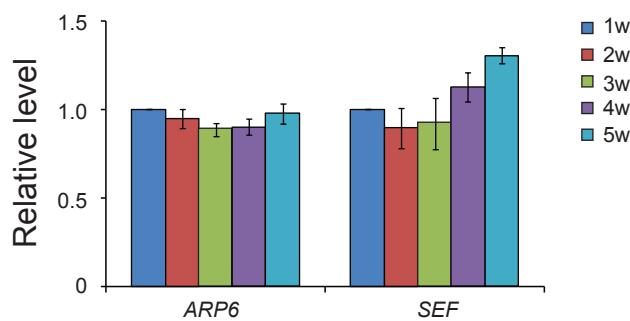


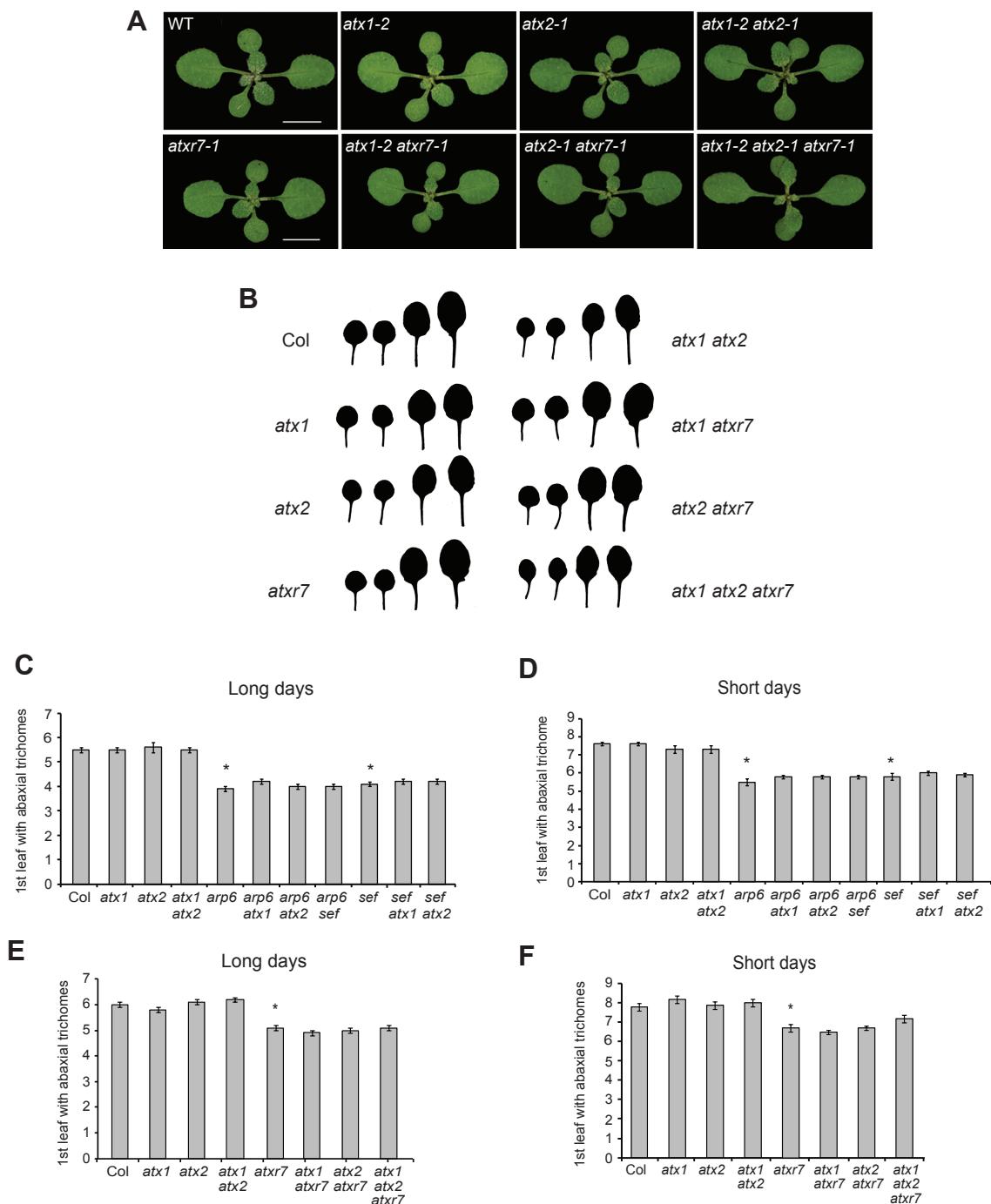
## SUPPLEMENTAL FIGURES

Figure S1



**Figure S1. *ARP6* and *SEF* are not temporally expressed.** RT-qPCR analysis of *ARP6* and *SEF* in 1-week-old, 2-week-old, 3-week-old, 4-week-old, and 5-week-old shoot apices. No significant difference is observed between two successive time points, Student's *t* test, p>0.05.

Figure S2



**Figure S2. The trithorax-type H3K4 methyltransferases ATX1 and ATX2 function in parallel to the SET1-type H3K4 methyltransferase ATXR7 in shaping juvenile leaves, not the production of abaxial trichomes.** (A) 12-day-old Col, *atx1*, *atx2*, *atx1 atx2*, *atxr7*, *atx1 atxr7*, *atx2 atxr7*, and *atx1 atx2 atxr7* mutants grown in LDs. Bar = 0.5 cm. (B) Fully-expanded rosette leaves of Col, *atx1*, *atx2*, *atx1 atx2*, *atxr7*, *atx1 atxr7*, *atx2 atxr7*, and *atx1 atx2 atxr7*. (C, D) First leaf with abaxial trichomes in Col, *atx1*, *atx2*, *atx1 atx2*, *apr6*, *atx1 arp6*, *atx2 arp6*, *arp6 sef*, *sef*, *atx1 sef*, and *atx2 sef* mutants under long day (C) and short day (D) conditions. (E, F) First leaf with abaxial trichomes in Col, *atx1*, *atx2*, *atx1 atx2*, *atxr7*, *atx1 atxr7*, *atx2 atxr7*, and *atx1 atx2 atxr7* mutants under long day (E) and short day (F) conditions. Samples with different letters are significantly different at  $p < 0.05$ , Tukey's HSD test.  $n = 20$  to 24 for each genotype.

Table S1: PCR primers

Primers for genotyping	Forward primer	Reverse primer
arp6-1	CGTCATCAATGTCAAACATCG	TCCATTGAAAACCACCTTG
arp6-2	TGCATGGACTCTAACCCCTAC	AAGAGTCTGTGGTGGTATGG
sef-2	AGCACATAAAACAGCCATGG	AAGTTGTTAAAGGCCAATGG
hta9-1	AATCCTTCCAATGAATTGC	GGGAAAGGTGCTAAAGGTTG
hta11-2	AGAAAGGAAGAAGGATGTGGC	TGTTGTTTTGGTCTCCCC
atx1-2	AATGAAAGCATGCGGATACAC	TCCGTGTTGACTGGAAAGATC
atx2-1	TTCCCTACCATGAAATAACGC	TTCATGGTTGGATCTTTG
atxr7-1	TCTTGTGACAGGTGCAACTTG	AAACAAAGCTAGGCACAAGGC
Primers for qPCR		
ARP6	GATGGTGTACACATACCAAAGGC	GTCCCGCCTGATTCATCCCTAAATCTG
SEF	TAGGCTAGAGGCTTAGAGAACGA	GAGTTTACGCTTGATCCTTG
STM	GCCCACATCATGACATCACATC	GGGAACACTTTGTTGGTGGTG
ACT7	GATATTCAAGCCACTTGTCTGTG	CTTACACATGTACAACAAAGAAGG
FLC	AGCCAAGAAGACCGAAGTCA	TTTGTCCAGCAGGTGACATC
FT	CCTCAGGAACCTCTATACTTGGTTATGG	CTGTTGCCTGCCAAGCTGTC
AP1	TCCACTGATTCTGTATGGAGAAG	TCTTCCCCAAGATAATGCCTCTGGT
NZZ	CAATGGAGGAATTGGGAGCTA	CCACTGAAACTCTTCACCATA
MSI1	GACCGTCATTCAACCCCTA	TCATCAGGTATGGATTGTG
Primers for ChIP		
STM-a	GCCCACATCATGACATCACATC	GGGAACACTTTGTTGGTGGTG
STM-b	GGCTGGACCAGAAACAGATAAA	GAAAGGATTGCCAAGACATTA
ACT7-a	TTCGCACATGTACTCGTTCG	AGAGAGAAAGATAGAGAAATGGAGGAGAA
ACT7-b	CCTTCCAACAGGTAAAAATCC	CCACATCTGATTCACACACAC
FLC-a	CGACAAGTCACCTCTCCAAA	AGGGGAAACAAATGAAAACC
FLC-b	TTGACAATCCACAAACCTCAATC	TCAATTCTAGAGGCACCAA
FT-a	GAGACCCTTATAGTAAGCAGAGTTG	GGGAGTTCAAGTGAAGAACCAAAGT
FT-b	CATCAATTGTCCTCCAAAAAGC	GCGATCAGAAAAACACAGACATACATAA
AP1-a	GGTCATACCAAAAGTCTGAGCTC	CTTGTCTCTATCCTCTTCAATTGA
AP1-b	CGAAAGACATGGCTATTGGAGAAC	TGAACCCCTAGAACACACTAATTATACC
NZZ-a	GAGAGCAGAAACAAACACACACACT	GAAGAAGAGAGAAGTCGCCATTGA
NZZ-b	GTCGGGTGGGTCAAGGTTAT	TCTCGGTTAAGGCTGGTTAGGT
MSI1-a	CGAACAGACCATCAGCAACA	CCGAACGTCTCAGCCTAA
MSI1-b	GAGAAGGCACCTGAGTCGGTCC	TCTCGGTTAAGGCTGGTTAGGT