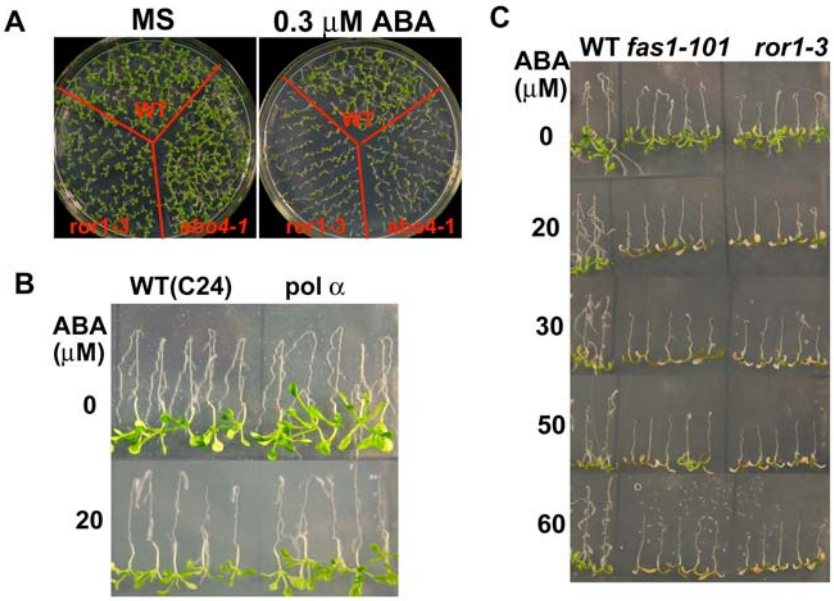
Supplemental Data Yin et al., (2009) Epigenetic regulation, somatic homologous recombination and abscisic acid signaling are influenced by DNA polymerase ε mutation in Arabidopsis

Supplemental Figure 1 Comparison of ABA sensitive phenotypes in *ror1-3, fas1-101* and *pol α* mutants.

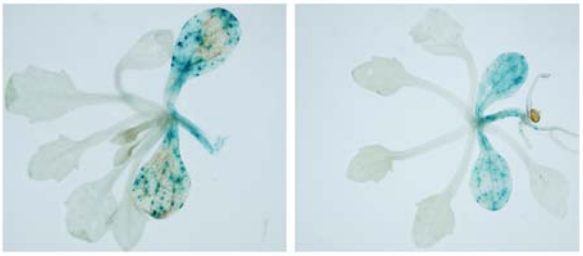
(A). Seed germination of *ror1-3* (T-DNA insertion in RPA2A) and *abo4-1* (Columbia accession) on MS or MS medium containing 0.3 μM ABA.

(B). Comparison of seedling growth of wild type (C24 accession), *pol α* mutant (another mutant allele in ICU2 DNA polymerase α) and *ror1-1* (a RPA2A mutation in C24 accession) on MS medium MS medium containing 20 μM ABA.

(C) Comparison of seedling growth of wild type, fas1-101 and *ror1-3* on MS medium containing different concentrations of ABA.



Supplemental Figure 2. Homologous Recombination patterns in *ror1-3* (1415) and *ror1-3* (1406).



Supplemental Table1 Primers used in this study

Supplemental Table 1a. The Primers Used for Real-time PCR in Gene Expression Assay

Gene name	Primers	Annealing temperature(°C)
BRCA1	Forward: 5'-CCATGTATTTTGCAATGCGTG-3'	59
	Reverse: 5'-TGTGGAGCACCTCGAATCTCT-3'	
RAD51	Forward: 5'-CGAGGAAGGATCTCTTGCAG-3'	59
	Reverse: 5'-GCACTAGTGAACCCCAGAGG -3'	
GR1	Forward: 5'-GAAGGAGCAGACAAAGTGAG-3'	60
	Reverse: 5'-GGTGAGATGGAAGTGATAGG-3'	
MRE11	Forward: 5'-ACACTTCGAGTACTTGTTGCAACTG-3'	60
	Reverse: 5'-ATCACCTCCGAGGAGTAAGAAGTC-3'	
MSH2	Forward: 5'- CCATGTCAGCGCTCACATTGAC -3'	58
	Reverse: 5'- AGGAGGGAGAGAAATCTTCCAGC -3'	
MSH6	Forward: 5'- GCCCTGAAGAGCATTTCACAGAG -3'	59
	Reverse: 5'- TGGAACACCATCAGATGTAGAACCAG -3'	
Ku70	Forward: 5'- CGAGCTTCGTGAAACCAGAGATG -3'	61
	Reverse: 5'- CTTTCTTCATCAGGGTCATCGCC -3'	
Histone H4b	Forward: 5'-CCTTTAGAAAATGTCAGGTCGTGG-3'	60
	Reverse: 5'-TAACACCACCTCTACGAGCC-3'	
CycB1;1	Forward: 5'-GATCAATCATCGTCCTCGTACACG -3'	60
	Reverse: 5'-CACGTCTACTACCTTTGGTTTCCC-3'	
CDC2A	Forward: 5'-CCTGTCAGGACATTTACTCATGAG-3'	60
	Reverse: 5'-GCTTTTGGCTGATCATCTCAGC-3'	
CYCA2;1	Forward: 5'-GTTGCAGAGCTTGAACAAAGACC-3'	60
	Reverse: 5'-CCAACTTGTACTCTTCAGAGACCTC-3'	
TSI	Forward: 5'-TGGTTCACCAGATAAGCTCAGTGCCCTC-3'	61
	Reverse: 5'- GGGAATGGTATCAGATCCTAACAGTGTGG -3'	
FLC	Forward: 5'-TTGAACTTGTGGATAGCAAGCTT-3'	59
	Reverse: 5'-CGGTCTTCTTGGCTCTAGTCA-3'	
FT	Forward: 5'-GAACAACCTTTGGCAATGAGATT-3'	59
	Reverse: 5'-CACCCTGGTGCATACACTGTT-3'	
AP1	Forward: 5'-CGACGTCAATACAAACTGGTCGAT-3'	60
	Reverse: 5'-CTTTAGGGCTCATTGCTTGCA-3'	
18S-RNA	Forward: 5'-CGGCTACCACATCCAAGGAA-3'	58-61
	Reverse: 5'-TGTCACTACCTCCCCGTGTCA-3'	

Supplemental Table 1b. The Primers Used for Mapping-based cloning

BAC clone Name	Primers
F24B9	Forward: 5'-TCTGCTGTTTCACCAGCCTCC-3'
	Reverse: 5'-TTGTTCACCGACTGGGTTGC-3'
T23G18	Forward: 5'-CCGATGAGTGGCCAAGTGTTACG-3'
	Reverse: 5'-GTAGATCGAGGACAGAGGAGCC-3'
T27G7	Forward-1: 5'-ACTTGATTTGCGCTTCCGTGG-3'
	Reverse-1: 5'-GCACATGTACCTTGTTGTCTCTGC -3'
	Forward-2: 5'-GCCCATATTCGTTTGGGCTGTTAG-3'
	Reverse-2: 5'-CCTTTGAGGCTTTCAGTTTGACCC-3'

Supplemental Table 1c. The Primers Used for Amplifying Probes in RNA Gel Blot Analysis

Gene Name	Primers
RD29A	Forward: 5'-GACGAGTCAGGAGCTGAGCTG-3'
	Reverse: 5'-CGATGCTGCCTTCTCGGTAGAG-3'
COR47	Forward: 5'-GAAGCTCCCAGGACACCACGAC-3'
	Reverse: 5'-CAGCGAATGTCCCACTCCCAC-3'
LUC	Forward: 5'-GAAAGGCCCGGCGCCATTCTATCC-3'
	Reverse: 5'-CGTTCGCGGGCGCAACTGCAACTC-3'
TSI	Forward: 5'-CACTCTTGTTAATCCAAGTAGCTGACTCTCC-3'
	Reverse: 5'-GGGCTTTTGCCCATCTTCAATAGCT-3'
NPTII	Forward: 5'-GTCAAGACCGACCTGTCCGGTG-3'
	Reverse: 5'-GTCCTGATAGCGGTCCGCCACA -3'

Supplemental Table 1d. The Primers Used for Real-time PCR in CHIP Assay

Gene Name	Primers
FT	Forward: 5'-CTTGGCGGTACCCTACTTTTT-3'
	Reverse: 5'-ATCTCCCACTTGGTAGCCACT-3'
FLC-P3	Forward: 5'-CGAGCACGCATCAGATCG-3'
	Reverse: 5'-GGCGGATCTCTTGTTGTTTCTC-3'
FLC-P5	Forward: 5'-GCTGGACCTAACTAGGGGTGAAC-3'
	Reverse: 5'-CCTCTTTGGTACGGATCTATAATGAATC-3'
ACTIN	Forward: 5'-CGTTTCGCTTTCCTTAGTGTTAGCT-3'
	Reverse: 5'-AGCGAACGGATCTAGAGACTCACCTTG-3'
TA3	Forward: 5'-GCTAAAACGGATTTCTCATGTAGAGGAT-3'
	Reverse: 5'-TACTTATCCCACTCTAATCTCTTCCATAAACAC-3'

Reference

Cao, Y., Dai, Y., Cui, S., and Ma, L. (2008). Histone H2B monoubiquitination in the chromatin of FLOWERING LOCUS C regulates flowering time in Arabidopsis. Plant Cell **20,** 2586-2602.