

Supplementary materials

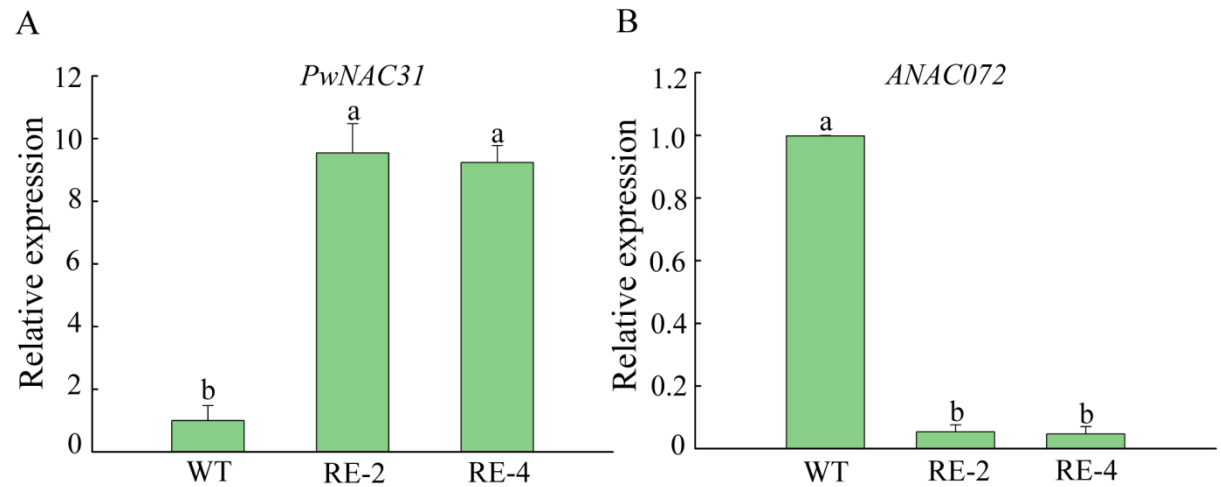


Figure S1: Identification of mutant and restore lines in *Arabidopsis*. (A) The expression quantity of *PwNAC31* were examined in T3 transgenic lines and WT *Arabidopsis* seedlings. (B) The expression quantity of *ANAC072* were examined in T3 transgenic lines and WT *Arabidopsis* seedlings.

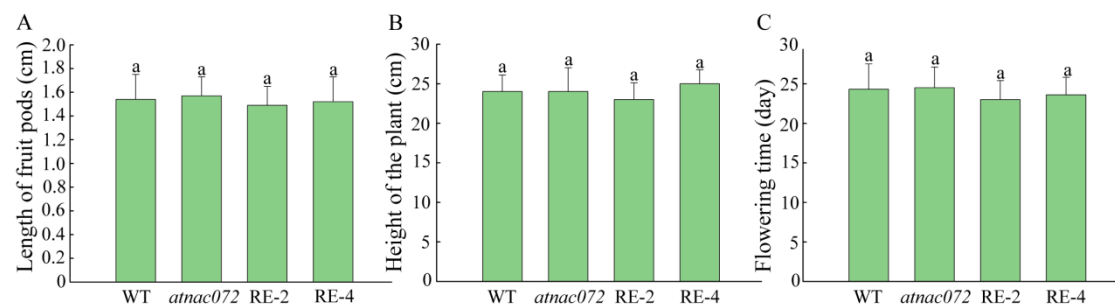


Figure S2: The growth condition of mutant and restore lines in *Arabidopsis*. (A) The fruit pods length and (B) plant height of 4-week-old transgenic and wild-type lines were measured under normal growth conditions. (C) Flowering time, examined as number of days required for flowering.

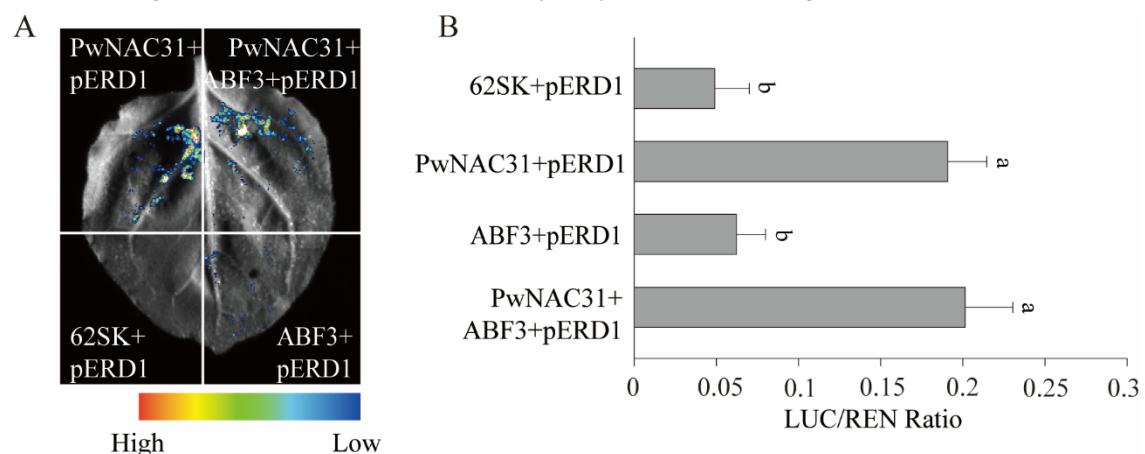


Figure S3: Dual-luciferase assay of ABF3 dose not activate the *ERD1* promoter. The left is dual-luciferase imaging, and the right is dual-luciferase activity assay. The error bars indicate (\pm SD) of three independent replications and the different lowercase letters in Figure D mean significant differences at 5% level treatments.

Supplementary Table S1. The CDS sequences used in this study.

Gene Name	CDS
PwNAC31	TTGGTACATACATGTATGCGCGAGATTGGAAGAATGGGCTGCAAATCAGGACCAAACCTCTGCGCAGAT CAATCTGCCCCCAGGTTTCAGGTTCTATCCACGGACGAGGAATTGATGGTGCATTACTTGTGTAAAAG AGTGGCTTCACAGCCCTTCCAATTCCGATTATTGCAGAGATTGATTGTACAAGTTCGATCCGTGGCA ACTACCCGAGAAGGCGTTATTTGGGGAGAAAGAATGGTACTTTTTTCAGTCCACGTGACAGAAAATACC CAAATGGGTGCGTCCCACCGAGCTGCGGGATCTGGGTATTGGAAGGCTACTGGGACGGACAAACCT GTTACTGCTGGACTGAACAGGATGAAGGTCGGGGTGAAAAAGGCTTTGGTTTTCTACAAGGGGAAG GCTCCAGAGGTGTCAAGACCAATTGGATAATGCATGAATATCGTCTTGACAGACAGTGCCAGCAGGGC TGCAAAGAGAAAAAGGAAGCATCAGGTTGGACGACTGGGTACTGTGTGCAATATATGAAAAGCACTAC GCCAGTCAGAAGGCCGTGCCTAAAGAAAGCAATGAGTTATCATCATGCGTAGATCCAGAAGAAGATCA ATATATGGCACCCGTTGCATCGAATTCCCCTCCAGACATGGACGATAACAAGCTGCTCATCAATCTGCCG CGAATCAATTCCCTGAACAGAATAAACTCTCTTCTGAAATCCCCAGCAGGGAGATCATGAAGATGCCA GACCCGAACATAACCAGACGGAGCAACAATATTTCCCGTGAGAAACAGATGCCGGTTCTAATTCCGG AGGCCAGGCGATAGAATATGGTCAGAATCACCGTTCTGGAGAAACCAGCAATTCGGATACAACATATG ATCAGATGGCGCAGAACCCGTTTCTCAACAGTTAGAGCATATGCCATCCTGGGAGCCAATTCTAGTG CGTTTTTTGCAAGCCTGGCTGCAGAGCTCCTTTAG
DREB2A	ATGGCAGTTTATGATCAGAGTGGAGATAGAAACAGAACACAAATTGATACATCGAGGAAAAGGA AATCTAGAAGTAGAGGTGACGGTACTACTGTGGCTGAGAGATTAAAGAGATGGAAAGAGTATAA CGAGACCGTAGAAGAAGTTTCTACCAAGAAGAGGAAAGTACCTGCGAAAGGGTCGAAGAAGGG TTGTATGAAAGGTAAAGGAGGACCAGAGAATAGCCGATGTAGTTTCAGAGGAGTTAGGCAAAGG ATTTGGGGTAAATGGGTTGCTGAGATCAGAGAGCCTAATCGAGGTAGCAGGCTTTGGCTTGGTAC TTTCCCTACTGCTCAAGAAGCTGCTTCTGCTTATGATGAGGCTGCTAAAGCTATGTATGGTCCTTT GGCTCGTCTTAATTTCCCTCGGTCTGATGCGTCTGAGGTTACGAGTACCTCAAGTCAGTCTGAGG TGTGTACTGTTGAGACTCCTGGTTGTGTTTCATGTGAAAACAGAGGATCCAGATTGTGAATCTAAA CCCTTCTCCGGTGGAGTGGAGCCGATGTATTGTCTGGAGAATGGTGCGGAAGAGATGAAGAGAG GTGTTAAAGCGGATAAGCATTGGCTGAGCGAGTTTGAACATAACTATTGGAGTGATATTCTGAAA GAGAAAGAGAAACAGAAGGAGCAAGGGATTGTAGAAACCTGTCAGCAACAACAGCAGGATTTCG CTATCTGTTGCAGACTATGGTTGGCCCAATGATGTGGATCAGAGTCACTTGATTCTTCAGACATG TTTGATGTCGATGAGCTTCTACGTGACCTAAATGGCGACGATGTGTTTGCAGGCTTAAATCAGGA CCGGTACCCGGGAACAGTGTGCAACGGTTCATACAGGCCCGAGAGTCAACAAAGTGGTTTT GATCCGCTACAAAGCCTCAACTACGGAATACCTCCGTTTCAGCTCGAGGGAAAGGATGGTAATGG ATTCTTCGACGACTTGAGTTACTTGATCTGGAGAACTAA
ERD1	ATGGAGGTGTTATCTACTTCCTCACCTCTAACGCTTCACTCCCACCGACTCCTCTCTGCTTCTTCTT CTTCTTCACATGTCACCTCCATCGCCGCTTCTTCACTTTCTTCATTGCTTCTTCATATCTCGGAAT CTCCCTTTCTAACCGCACGATCCACCGCTTCTCCACAACCTCCGACGAACTTAAGACGATTTCCCTC AAAGAAAACGGAAGAAATTCATCCGATTTTCAGCGGTTTTCGAACGGTTCACCGAACGAGCGAT CAGAGCTATAATCTTCTCTCAGAAGGAAGCTAAATCGTTGGGAAAAGATATGGTTTACACGCAGC ATCTTCTCTTAGGTTTGATCGTGAGGATCGTGATCCTCAAGGCTTCCTTGATCCGGTATCACCA TCGACAAGGCTCGTGAAGCTGTTTGGAGTATTTGGGACGAAGCTAATTCGATTTCGAAACAGGA GGAAGCTTCTTCTACTTCGATTCAAAATCGACGGACATGCCTTTCTCTATCAGCACGAAACGAGT CTTTGAAGCTGCGGTTGAGTACTCTAGGACTATGGATTGTCAATATATCGCACCGGAGCATATAGC CGTTGGACTCTTCACCGTTGATGATGGTAGCGCCGGCAGAGTTCTCAAGAGATTGGGAGCAAATA

	<p> TGAATTTGCTCACAGCTGCAGCACTTACAAGACTTAAAGGAGAGATTGCTAAAGATGGAAGAGA GCCATCTTCTTCATCTAAAGGGAGCTTCGAGTCTCCTCCTAGTGGTCTGAATTGCTGGTTCTGGACC TGGTGGAAAAAAGCGAAAAATGTACTGGAACAGTTCTGTGTGGATCTGACAGCACGTGCTAGT GAGGGTCTTATTGATCCTGTTATTGGTCGGGAAAAAGAGGTTCAAAGAGTTATCCAGATACTTTG CCGCAGAACTAAAAACAACCCAATTCTTCTTGGTGAAGCTGGTGTGGGAAGACTGCCATTGCT GAAGGACTAGCGATTAGTATTGCAGAAGCCAGTGCTCCTGGATTTCTCTTGACGAAACGCATCAT GTCCCTGGATATAGGATTGCTAATGGCCGGTGCAAAAGAAAGGGGAGAGCTGGAGGCTCGAGTC ACTGCTTTGATAAGCGAGGTTAAAAAATCAGGTAAGGTCATTCTCTTCATAGATGAAGTGCATACA CTTATTGGGTCTGGCACAGTTGGAAGAGGGGAACAAAGGGTCTGGGCTTGACATTGCTAACCTCTT GAAACCATCACTTGAAGGGGTGAAC TTCAGTGCATTGCATCCACAACCCCTTGACGAATTTAGGA GTCAGTTTGAGAAGGACAAAGCCCTTGCAAGGAGATTCAGCCAGTGTGATTAACGAGCCAAG CGAGGAAGATGCGGTGAAGATTTTGTGGGCCTTCGTGAAAAATATGAAGCCCATCACAATTGCA AATATACTATGGAAGCCATAGATGCTGCAGTGTACCTTTCATCACGATATATCGCTGATAGATTTCT TCCAGATAAAGCTATTGATCTCATTGACGAGGCAGGAAGCAGAGCTCGTATTGAAGCTTTTAGGA AGAAAAAGGAGGATGCAATCTGTATCCTATCGAAGCCACCTAATGATTACTGGCAAGAGATCAAA ACAGTTCAGGCCATGCACGAAGTGTTCTCTCAAGCAGGCAAAAGCAGGATGACGGTGATGCCA TTTCAGATGAGTCTGGTGAAC TAGTTGAAGAGTCTTCTTTGCCACCTGCAGCAGGCGACGATGAG CCTATACTGGTGGGACCTGATGATATTGCAGCCGTTGCATCGGTTTGGTCTGGAATTCCAGTTCAG CAGATCACTGCAGATGAAAGAATGCTTCTTATGAGTCTAGAAGATCAGCTTAGAGGCAGAGTTGT TGGTCAAGATGAGGCGGTAGCTGCCATATCTAGAGCTGTGAAGAGGTCCCGGGTTGGCTTAAAA GATCCCGACCGTCCAATTGCTGCTATGCTTTTCTGTGGACCAACAGGGGTTGGAAAAACGGAGCT TACAAAAGCTCTGGCAGCAAATTATTTTGGCTCGGAAGAATCCATGCTGAGATTGGACATGAGTG AATACATGGAGCGTCATACTGTGAGCAAGCTGATAGGCTCTCCTCCTGGTTATGTTGGCTTTGAAG AAGGTGGAATGCTTACAGAAGCTATCAGGAGACGTCCTTTTACAGTGGTTTTGTTTCGATGAAATA GAGAAAGCACATCCGGATATCTCAATATTCTTCTCCAGCTGTTTCGAAGATGGCCATCTAACTGAT TCACAGGGAAGGAGAGTATCTTTTAAGAACGCATTGATCATAATGACCTCTAATGTCGGATCATTG GCCATTGCAAAGGGAAGACATGGTTCAATAGGGTTTATCCTCGATGATGATGAAGAGGCAGCATC TTATACCGGAATGAAAGCTTTGGTAGTCGAAGAACTCAAGAACTATTTCCGTCCAGAGTTGTTGA ACCGAATAGACGAAATCGTCATTTTCCGACAGCTAGAGAAGGCTCAGATGATGGAGATCTTGAAC CTGATGCTACAAGACTTGAAGTCGAGGCTCGTGGCACTCGGAGTTGGTTTAGAGGTGTCTGAAC CCGTCAAGGAGCTCATATGCAACAAGGCTATGATCCAGCTTACGGTGCACGACCACTCCGGAG AACTGTCACAGAGATTGTTGAAGATCCACTCAGTGAAGCCTTTCTTGCCGGGAGCTTCAAGCCTG GTGATACGGCTTTTGTAGTTCTTGATGATACCGGAAACCCATCGGTTCCGGACCAAAACCAGATTCTT CCACTATACGAGTTACAGACAAAACATCGATCGCATAG </p>
ABF3	<p> ATGGGGTCTAGATTAAACTTCAAGAGCTTTGTTGATGGTGTGAGTGAGCAGCAGCCAACGGTGG GGACTAGTCTTCCATTGACTAGGCAGAACTCTGTGTTCTCGTTAACCTTTGATGAGTTTCAGAACT CATGGGGTGGTGGAAATTGGGAAAGATTTTGGGTCTATGAACATGGATGAGCTCTTGAAGAACATT TGGACTGCAGAGGAAAGTCATTCAATGATGGGAAACAATACCAGTTACACCAACATCAGCAATG GTAATAGTGGAACACTGTTATTAACGGCGGTGGTAACAACATTGGTGGGTTAGCTGTTGGTGTG GGAGGAGAAAGTGGTGGTTTTTCTACTGGTGGGAGTTTGCAGAGACAAGGTTCACTTACCTTGC CTCGGACGATTAGTCAGAAAAGGGTTGATGATGTCTGGAAGGAGCTGATGAAGGAGGATGACAT TGGAATGGTGTGTTAATGGTGGGACAAGCGGAATTCCGCAGAGGCAACAAACGCTGGGAGA GATGACTTTGGAGGAGTTTTTGGTCAGGGCTGGTGTGGTTAGGGAAGAACCTCAACCGGTGGAG AGTGTAACATAACTTCAATGGCGGATTCTATGGATTGGCAGTAATGGAGGTCTTGGGACAGCTAGT </p>

	AATGGGTTTGTGCAAACCAACCTCAAGATTTGTCAGGAAATGGAGTAGCGGTGAGACAGGATC TGCTGACTGCTCAAACCTCAGCCACTACAGATGCAGCAGCCACAGATGGTGCAGCAGCCACAGAT GGTGCAGCAGCCGCAACAACCTGATACAGACGCAGGAGAGGCCTTTTCCCAAACAGACCCTATA GCATTTTCCAACACTGTTGATGTGGTTAACCGTTCTCAACCTGCAACACAGTGCCAGGAAGTGAA GCCTTCAATACTTGAATTCATAACCATCCTATGAACAACAATCTACTGCAAGCTGTCGATTTTAA AACAGGAGTAACGGTTGCAGCAGTATCTCCTGGAAGCCAGATGTCACCTGATCTGACTCCAAAG AGCGCCCTGGATGCATCTTTGTCCCCTGTTTCCTTACATGTTTGGGCGAGTGAGAAAAACAGGTGC AGTTCTGGAGAAAGTGATTGAGAGAAGGCCAAAAAAGGATGATAAAGAATAGGGAATCAGCTGC AAGATCCCGCGCTCGCAAGCAAGCTTATACGATGGAAGTGAAGCAGAAATTGCGCAACTCAAA GAATTGAATGAAGAGTTGCAGAAGAAACAAGTTGAAATCATGAAAAGCAGAAAAATCAGCTTC TGGAGCCTCTGCGCCAGCCATGGGGAATGGGATGCAAAAAGGCAATGCTTGCGAAGGACATTGAC GGGTCCCTGGTAG
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Supplementary Table S2. The promoter sequences used in the study.

Gene Name	Promoter
PwNAC31	GTGTGGAATTGTGAGCGGATAACAATTCACACAGGAAACAGCTATGACCATGATTACGCCAAGC TTGCATGCCGGTAGAGGTGTGGTCAATAAGAGCGACCTCATGCTATACCTGAGAAAGCAACCTGA CCTACAGGAAAGAGTTACTCAAGAATAAGAATTTTCGTTTTAAAACCTAAGAGTCACTTTAAAAT TTGTATACACTTATTTTTTTTATWACTTATTTAATAATAAAAAATCATAAATCATAAGAAATTCGCCCCG GAATTAGCTTGGCTGCAAGCGCGCAAAAAACCCCTCAAGACCCGTTTAGAGGCCCAAGGGGTT ATGCTAGTTATGCGGCCGCTGCAGGTGCAGGATCCGCTGATGCTTCCTTTTCTCTTTCAGCCC TGCTGGCACTGTCTGCAAGACGATATTCATGCATTATCCAATTGGTCTTGACACCTCTGGGAGCCT TCCCCTTGTAAGAAAACCAAAGCCTTTTTCACCCCGACCTTCATCCTGTTCACTCCAGCAGTAACA GGTTTGTCCGTCCAGTAGCCTTCCAATACCCAGATCCCGCAGCTCGGTTGGGACGCGACCCATT TGGGTATTTTCTGTACGTGGACTGAAAAAGTACCATTCTTTCTCCCCAAATAACGCCTTCTCGGG TAGTTGCCACGGATCGAACTTGTACAAATCAATCTCTGCAATAATCGGAATTGGAAAGGGCTGTG AAGCCACTCTTTTACACAAGTAATGCACCATCAATTCTCGTCCGTGGGATAGAACCTGAAACCT GGGGGCAGATTGATCTGCGCAGAGTTTGGTCTGATTGTCAGCCATTCTTCCAATCTCGCGCATT GCCATGGCCATATGCAGGTCTCTCTGAGATCAGCTYSYKCTCCTCCATGATGGCGGCTCGCCCT ATAGTGAGTCGTATTACAAATTCCGGCGATACAGTCAACTGTCTTTGACCTTTGTTACTACTCTCTT CCGATGATGATGTCGCACTTATTCTATGCTGTCTCAATGTTAGAGGCATATCAGTCTCCACTGAAG CCAATCTATCTGTGACGGCATCTTTATTCATTATCTTGTACAAATAATCCTGTTAAC
DREB2A	ACAGAGAAGCAGGCTCCCATCTCTCATAGATTCTCAAATTCCTACCAGAGAGATTAATATACAAATTCCT TTCCTAATGTTTTAGTTTATTAAGTGAAGGTGTGTGCACGATCATTGGGTTGACCACCAATCTTGGCATC CAGTCATCTACGACTCGATCAAATATTTATGTTATTTTAAAAATGAACTGTAACCAAGATAACATTTTTTT CATAAGGTCAACGACCCTTGGGATGTTAACAGAGCCAAGTTTAGTGAGCACTATGTGCTCGTTTTTCT TAACACAATTCTAACGTGGTTTGGCCAAGCCAAGTCAACATTTTACTTACATCTCGTTTTCCAATAATGG TTTTGTAATCGATAACCTAAATCATTGTAATGAATGCGTTCCTCCCTATCGATCCTAGGCCTTAGACAATG CTGAATGATTCATAGCCACGCGAATAACCTATTCTACTAATATGAAAGAAAGAAGCCAAACTTACAG AGCTCTTCTCACGGTCGTGCAAGAAAAGAGAGTCTACAGTCAGCAACAAAATTAGTGTTGCCATCATG

	GCATCATCTTGAGCTTTTTCCGCACAAATAATTTATCATCCAAATGTTGTTCACTAAACCAAAAAACAAA CAAGCATTACAGCGAAGAAACCAACTCGTAGATACAGATTTCCAAATTCATGCCTTATTTAGACCAATAA AAACTGAAATTTCTCTTCAGCGAAAAAACAACAACTGAAATTTATATAGATCCAGAAGATAG AAACTGTAGGCTCAATCGACTAGACTAGAAGATGCTCACCCGATCGTGCTTGAGATAGCGAGATAGTA GCAACACCGACGGTAGAAATAAAATGGACGACACCCATCCAATGGGCTAATTTAGATTAAACGGGCTTT AAGGGTTTGATAATGGATGTTAATTAAGTGGACATGGGATTGTATCACGTAGGCAATGGGTTTGAT AATGGATGTTAAGTAACTAAGGCCCATGAGGTTGAAGTACGTAGGCAATTCGTGAGCTTACGTTAGC GATGCCGTTAGAGACACGTAGTGGATGAAGTGGCTTTGGTTAGCAAAGGACACATGAGGCACATGCA AAGGCTATAAATGACTGCTGCTTTGCTACAACTTGCGATTCCCAAATTTATAAGGTAATGGACCCTATC ACCTCTGCTCGAAGCTAAGCCACCCAAGTTTGAGCTTCACCATTTGACACGTCTCTAGCTAATACTTAAT GCTTAACTTTAACTAATACTTCATGTTTAAAGACATTTCTGGCTGACACATTTATGAATTCGCTCTATGT CGTACGTACACCGGAAACCTTTAATTTTACAATATTAACCGTGATCTTTTTAAAAATATCTATATAACGAT AAGTATCTCATCAAAACAAAATTGAATAATGTGCACGTTTGTAACCTAGAAAAACAGGCAATAAACA TCATCATCCAATTACACATCTAGTAAGTGTGATGCAGTGGCAAACCTGGCAATAAACCAAGAAAAATCGA GAAAGAGCAGATGAGACAGTGTGTGTGTGTCAGGGTTAATAAAAAAATGAAGATATTTAAAATT TCATAATATTTAAATAATGAAGTAGTTTATGATCTTATCCATAAATCAATTTAAAAAGGTTAAACTTTA CTTTCCGTATCAACAGCGTGTTCGAGAAGATTCGGGAGGACACTCGTCGAACGGAAAAGTCGTCTA AGCCTTTATGTTCAATCAAAACTGACACGTAACCTTGCTCTCAACAGAAAAATAAAATAATGTTAG AAAAATCTAGAGAAGGCTATAAATACTCCGTAGATACTTTGTCTTCCTT
ERD1	TGGTCTTATGGAATCTCTCACTACTTTTTTAGAGGAAAATTTGTAAACGCAGAGACAACATTTTCCCG AGAAAATGAGAGAATTTTCCGGGAAAATTTGATGTTATTCTTCTCTGAAAGTAAACGATCTCTCA AGTAATTTTGTAGGAGAATGAGAAAATGGATTTCGTATAAATAGTGAAGAGAAGAGACGAGTAAAAG AATTTGAATAAAGAAGAGAGACGTGGTTCGGACTTGCCCACTTTGTCATCTATGATGCAAAATAT TTAACAAATAACAACTAATTGAGGTTGTAACGTGCATTTGTAATGCAATACATTGAGAAAAAACAATA TTATACATAACAAAGTTGAGTTTTTTTCACTAGTTGTTTATTTAAGAATTAGAACAATAGTCCACTGTTTT TTAACAAGTCCATAGCGAATGTTGGAACTTATTTAAAAAATTATTAATTGGAAGTCTAAAGAATTACG AAAACAAATTGTATTTGATTAACAAAGTACAAATTGCATTTAAAAAGAAATAGTCTATAGAACATGGA TGATCCTTCCATATAAAGTTTGATCATGCACATAGTATGACAATAATCAAAGAGCGGGGATAGCTGTGAA TCTTTAGCAGCGAAAACCTTCAACATATATTTATGAATACAACAATGTTATAAATGAATTCGTACGAC ATAATAAATGTTATAGTAATTCTTATGTTTGTCCAAAAAAGAAAGTAATCTTAGGTTAAATATATAAA AACATGACAAAAGTGAATCTTAAAGATATTTGATGTACTACATATATATAACAAATTTATCAAAGATGT ACATAGACAACTATGTTCTTAAACTCCACAAACATTACGGCAGTTAGAATTTAAATTTATCTTGGAATAT TGTTTGTATATTATTAACAAATGTAAATTGGTGTAGGTTTTTTCAGATTTTCATAATGAAAACAGTTTAAATT ATGGTTACGAGATAATTTGACGAATATGAATACATATATAGAAAATGTTTGGGCCTATATCTATGAAAAT GTTTGGGCCTATCTATATCTATGAAAATTGTATGAGATACCAACAAAATAAAATATTTAAAGTAGCAAAAC ATTGTGTTACTTTTCTATTATCTTGCTTAAATAAAATAAAATCAATTTTTTTTTTAAGAAGTAACACAATG TGAAGAATACGTGTGTACTTTTTTTTTTTTGGCGTAAATAAAATAGTAAATTAAGACAAGATTAATAGA AAAGTACACACGTATTCTTCCATTGTACGTTAAAAAGCTCGTGAATTCATGCATGAGGACGATTTG GGTAACCAATAAGTTGACTATATTTTGTATGCTTTCTATTTTCTTCACATGGAAAGAATTTCCAACG AAAAGTTGAAGGGGAGACAATTAGGAACACTAAATTGTCACCATTAGGCTCTTAAGTTTTAATTTGGC AACCAATTCATTTTCTATTCTGTATTTTGGATTGGGACCGTTTATTTGTTGTGTGTGTGCAACTT GAGCTCTTCTCTGTAACACGCATGTGTTGCGTTTGGTTTTAATTTATTTGCCTACTTTTGCCTTTTCAA CGTTTGTACCACATTTGAACTATAAAGTCCAATCCATACCGATCCTTACAACCATATAAATGTGCTAC AACAAAAGTTAATCTTTGATCTTGATCAACTCAAAGATGACTATACATGATTAGTTCTCCTAAAAGCTAAT

	GTTGTAGAGTGCAATTGCCGACAAACCTCCAAGTTTTGTGTCAACTTGAATTTGTA
ABF3	AAACTCTCTCTTTTTTGTAAAAAAGGTTATATATCTTTAACCTTCTAGGATTTAGCCTAGCTGAAAA AAAGTTACACATTAAACTTGTTTTGTTAACAACGTTTAGCATTTGCGTTGTGTGTTGTTCTTCCGGT TGTTATAGTTTCGTACTTCGTTGGTTTTGAGTTTTGGATTCTTGAAAGGTGGTTATAATTTATACATTTT GTTTCTACACGACCTTAAAGAAGTAACCTCAATTAATTAATCTAATTCGGGAAAGAGCACGTCTCAAA AGAGTCGTCGAGTCCCATGTGAATTCTATATGATAACATTAAACAAAATCACGGTTCATATTTGTTTAAT ACTAGTATGTATTGCAGAGTAGACTTTCCTAATCCAGTAGATTCTTAAAGAAAAATAATATAAAAGAT TGAAAATAGAAATAAAAGATGGGAGACACGAAGGGTCACTTGATTGTACCGAGTCCAAATGTAAAGA AGTCTCAATAATGGTGAATAAAATAAAGAAGTTGAAGACAAGATCACAATCACCATGTGAAGATCAAC ACACAAGATCATAATTTTATTGTATGTTTGCTTCATTTCAACTTTTTTAAATATTGTTAAGAGGGCAGGCA TTGAGTGCGCCACGTGGCAAATGACCATCCCTTTGTAGGTGCAGCAAACGTGATAAAGATTCCGGACT GTTCACCCATTCCCTTCTCCATTTGTTTCTATTTTTCTTACAAATCTTATCGTATCATAATTTTTTTTCCA TAATGCGCTCCCTTGAATGGAATAACGTTGGTTATTTTGTTCACCAAAATTTTCATACCATTCGATCAA ATAGGTGCATCAACTTACAAGAAATGAAAGTGTGATCCCTATTTTATTAGGTAGCTAAGTAAGTGTTAGT GAACACTACGTTAGATTGTTACTCAAATAACGGATCAACGAATCTCGTATTCATTACTATACTGCTAATGA ATGCATCAATTTTAATTTTATTGGTTATCTATCTTAAAAAAGTTATAAGAATATTTTGATAATTTGTTT CAAGATGTAGTACTAGTAGTAGTACTTGGTCTCGTAAACGACGACGCCGTTTAGGAAATCAAACGGCC AAAAATGCTTCCACTTTGCGAAATTTTATTGGTGGGAAACGCAAATGTATCGATAATGATTTAAAGAAA AAGCGGCGTTTCTAATTGGACCACGTTGCCAATCTCTACGGCTCACGCACGATCTGACGTCAAATTGG CATAATACTATAATAACCTTATCGAGAATAAAATAATAGTCGCATCCAAACAAAAGAAACCAACCCTTTTA TATCACGACGAGTGTACGCCATGGACACTTGTCATCTCTCGCTCTGACCCCTTCAGGTATCTTTTA TTTCTCAAAGAGGAATTATTGATTTTCCATTTCAAAGAAAAAATAAATTCGAAGGTCAGGAAAATT AACAAAAAACTTCCTTTTTTTTTTTGTTAGTTTGTGTGACTGAGCTGCTTCATTTTTTTCTTTCTTTTTT TTTTTGGTTTGATGAATCGATTTTGTGTCTATTACTGATTGGTTTTCTTGTTTCTGATTCTGATTCTGA AGAGAATCATGATTTTTTTTTTCCGCTGAATAATAAGCATATGATTGGGTGTTTTGGAGATTGTTTACT GATTAAAAGGAGATTCTTTCCATTTTACCATTGCTCTGTTTGACTTCATTGTGCTTATATTTCAATTAG ATCTTTTGTGTTGGGTTTAGCTTTGGAAGTATAAAATCTGATTTGTCTCACGGCTTTGGATTGGTTC TTAAATTTTGGTACTTTAAACTGGATAAAGATCAGTGCTTTTTTAGATTCTCGTTTGTGATGAATTTA TGGATGTATGTATAATTAACCATAATCTCTGCTTGTGTTTCTTATAGGTAAATATCCAGAAGCTTG ATCCTCCTAGTTGTACGAAAGCTTGAGTA

Supplementary Table S3. PCR primers used in this study

Gene Name	Gene No.		Sequences(5' to 3')
PwNAC31		Forward	TCCGAGCTTTTGTCTTTGTTT
		Reverse	AGAGCAGAGCAGAATGAATGA
ABF3	AT4G34000	Forward	GATGTGGTTAACCGTTCTCAAC
		Reverse	CAGCTTGCAGTAGATTGTTGTT
DREB2A	AT5G05410	Forward	CATGTTTGATGTCGATGAGCTT
		Reverse	ATTCCGTAGTTGAGGCTTTGTA
ERD1	AT5G51070	Forward	CTTTCTCTATCAGCACGAAACG

	Reverse	CGGTGCGATATATTGACAATCC
PwNAC31-pro	Forward	GTGTGGAATTGTGAGCGGAT
	Reverse	GTTAACAGGATTATTTGTACAA
DREB2A-pro	Forward	TTTCAACAAATCATCTCGTCTTG
	Reverse	CATCTCCTTCCCAGAAACAA
ERD1-pro	Forward	AGTGAAGAGAAGAGACGAGTAAAAGAA
	Reverse	GATCGAATTCGTCTCGTCCGT

Supplementary Table S4. Primers for vectors' construction in this study

Gene Name		Sequences(5'to3')
<i>ERD1pro</i> -KpnI-pAbAi-F	Forward	TTCGAGCTCGGTACCAATTTGAATAAAGAAGAG
<i>ERD1pro</i> -Sall-pAbAi-R	Reverse	TGCCTCGAGGTCGACAGGAAGTAGATAACACCT
<i>PwNAC31</i> -NdeI-AD-F	Forward	GATTACGCTCATATGATGCGCGAGATTGGAA
<i>PwNAC31</i> -EcoRI-AD-R	Reverse	ACCCGGGTGGAATTCCTAAAGGAGCTCTGCA
<i>DREB2A</i> -AD-NdeI-F	Forward	GATTACGCTCATATGATGGCAGTTTATGAT
<i>DREB2A</i> -AD-EcoRI-R	Reverse	ACCCGGGTGGAATTCTTAGTTCTCCAGATC
<i>ABF3</i> -AD-NdeI-F	Forward	GATTACGCTCATATGATGGGGTCTAGATTA
<i>ABF3</i> -AD-EcoRI-R	Reverse	ACCCGGGTGGAATTCCTACCAGGGACCCGT
p0800- <i>ERD1</i> -KpnI-F	Forward	GGCGAATTGGGTACCAATTTGAATAAAGAAGAG
p0800- <i>ERD1</i> -Sall-R	Reverse	ATCGATACCGTCGACAGGAAGTAGATAACACCT
SK- <i>PwNAC31</i> -BamHI-F	Forward	AGAACTAGTGGATCCATGCGCGAGATTGGAA
SK- <i>PwNAC31</i> -Sall-R	Reverse	CCCCTCGAGGTCGACCTAAAGGAGCTCTGCA
SK- <i>DREB2A</i> -BamHI-F	Forward	AGAACTAGTGGATCCATGGCAGTTTATGAT
SK- <i>DREB2A</i> -Sall-R	Reverse	CCCCTCGAGGTCGACTTAGTTCTCCAGATC
SK- <i>ABF3</i> -BamHI-F	Forward	AGAACTAGTGGATCCATGGGGTCTAGATTA
SK- <i>ABF3</i> -Sall-R	Reverse	CCCCTCGAGGTCGACCTACCAGGGACCCGT
<i>PwNAC31</i> -AD-NdeI-F	Forward	GATTACGCTCATATGATGCGCGAGATTGGAA
<i>PwNAC31</i> -AD-EcoRI-R	Reverse	ACCCGGGTGGAATTCCTAAAGGAGCTCTGCA
<i>DREB2A</i> -BD-NdeI-F	Forward	GAGGACCTGCATATGATGGCAGTTTATGATCAG
<i>DREB2A</i> -BD-Sall-R	Reverse	CCGCTGCAGGTCGACTTAGTTCTCCAGATC
<i>ABF3</i> -NdeI-BD-F	Forward	GAGGACCTGCATATGATGGGGTCTAGATTAAAC

<i>ABF3</i> -SalI-BD-R	Reverse	CCGCTGCAGGTCGACCTACCAGGGACCCGTC
<i>RHA2A</i> -NdeI-BD-F	Forward	GAGGACCTGCATATGATGGGGCTACAAGGT
<i>RHA2A</i> -SalI-BD-R	Reverse	CCGCTGCAGGTCGACTCAGTGGAGAGAGAA
<i>ZFHD</i> -NdeI-BD-F	Forward	TAAAATGCGACACTACGTTTAC
<i>ZFHD</i> -SalI-BD-R	Reverse	CAGCTTTGTTGGAACATACCA
PwNAC31-1300-F	Forward	CGCGGATCCATGCGCGAGATTGGAAGAATGGGC
PwNAC31-1300-R	Reverse	CGGGGTACCAAGGAGCTCTGCAGCCAGGCTTG
PwNAC31-1205-F	Forward	CCATCGATATGCGCGAGATTGGAAGAATG
PwNAC31-1205-R	Reverse	CGGGGTACCCTAAAGGAGCTCTGCAGCCA
PwNAC31-N-BD-F	Forward	CATGCCATGGCAATGCGCGAGATTGGAAGAATG
PwNAC31-N-BD-R	Reverse	CGCGGATCCGCCTGATGCTTCCTTTTCTCTTTGC
PwNAC31-C-BD-F	Forward	CATGCCATGGCAATCAGGTTGGACGACTGGGTACTG
PwNAC31-C-BD-R	Reverse	CGCGGATCCGCTAAAGGAGCTCTGCAGCCA
PwNAC31-BD-F	Forward	CCGGAATTCATGAGTTTATCAGTAAATGGG
PwNAC31-BD-R	Reverse	AACTGCAGATTACTTTACGAAGTTCCATAAATC
GFP-F	Forward	GTCCAACACGTCTCAAAGCAAG
GFP-R	Reverse	TCCATGCCGAGAGTGATCCC

Supplementary Table S5. qRT-PCR primers used in this study

Gene Name		Sequences(5' to 3')
PwNAC31-RT-F	Forward	CAACCAGACGGAGCAACAATATTC
PwNAC31-RT-R	Reverse	GTTCTGCGCCATCTGATCATAGTT
ABF3-RT-F	Forward	GATGTGGTTAACCGTTCTCAAC
ABF3-RT-R	Reverse	CAGCTTGCAGTAGATTGTTGTT
NCED3-RT-F	Forward	GATGAATTTGTTCCAGAGAGCG
NCED3-RT-R	Reverse	AACACTAGGATCAGCCGTTTTA
DREB2A-RT-F	Forward	CATGTTTGATGTCGATGAGCTT
DREB2A-RT-R	Reverse	ATTCCGTAGTTGAGGCTTTGTA
ABI5-RT-F	Forward	AATAAGAGAGGGATAGCGAACG
ABI5-RT-R	Reverse	GCTACCACCACCTCTATGTATC

RD29A-RT-F	Forward	TTCTGTAAGGACGACGTTTACA
RD29A-RT-R	Reverse	CGTACTCGTTACATCCTCTGTT
ERD1-RT-F	Forward	CTTTCTCTATCAGCACGAAACG
ERD1-RT-R	Reverse	CGGTGCGATATATTGACAATCC
PwEF1-RT-F	Forward	AACTGGAGAAGGAACCCAAG
PwEF1-RT-R	Reverse	AACGACCCAATGGAGGATAC
ATNAC072-RT-F	Forward	GATCCGTTAGCCCAGTTGAGT
ATNAC072-RT-R	Reverse	TAGCCTGCAACTTTCCGACAT
ACTIN-RT-F	Forward	GGTAACATTGTGCTCAGTGGTGG
ACTIN-RT-R	Reverse	AACGACCTTAATCTTCATGCTGC
