

Supplementary Table 1

Table S1 Flowering time of various plants in this study.

Genotype	Days to flowering	Rosette leaf number
Long-day conditions		
Col-0(WT)	25.3±0.9	12.0±0.6
<i>wrky41</i>	25.2±0.8	12.1±0.5
35S:WRKY41-1	20.6±1.1	9.4±0.8
35S:WRKY41-2	20.4±1.1	9.4±0.7
<i>wrky53</i>	25.7±0.7	11.9±0.6
35S:WRKY53-1	21.1±0.9	9.3±0.7
35S:WRKY53-2	20.9±0.7	9.5±0.6
<i>w41/w53-1</i>	28.7±0.8	13.3±0.7
<i>w41/w53-2</i>	28.6±0.7	13.8±0.7
<i>soc1</i>	39.2±1.7	21.3±1.0
<i>lfy</i>	26.1±0.8	11.7±0.6
35S:WRKY41- <i>lfy</i>	26.0±0.7	11.9±0.5
35S:WRKY41- <i>soc1</i>	38.4±0.7	22.1±0.8
<i>ahk2/3</i>	26.0±0.5	12.1±0.7
<i>ahk2/4</i>	26.1±0.6	12.2±0.7
<i>ahk3/4</i>	26.1±0.8	12.4±0.6
35S:WRKY61-1	25.5±1.1	12.0±0.5
35S:WRKY61-2	25.1±1.1	11.9±0.6
GV treatment		
Col-0 (WT)	21.4±1.3	9.9±0.7
<i>wrky41</i>	23.3±0.9	11.8±0.6
<i>wrky53</i>	22.9±1.0	12.0±0.5
<i>w41/w53-1</i>	28.2±0.7	13.7±0.7
<i>w41/w53-2</i>	28.4±0.7	13.9±0.9
<i>soc1</i>	39.1±1.8	21.6±0.9
<i>lfy</i>	25.8±0.7	11.8±0.5
<i>ahk2/3</i>	22.2±0.7	9.4±0.7
<i>ahk2/4</i>	21.9±0.8	9.4±0.8
<i>ahk3/4</i>	22.1±0.8	9.3±0.8
Short-day conditions		
Col-0 (WT)	66.4±0.9	46.0±0.9
GV treatment		
Col-0 (WT)	58.1±1.0	39.8±1.1
Flowering time is presented as the days to flowering and the rosette leaf number. Values are mean ± SD. from at least 45 plants for each genotype.		

Supplementary Table 2

Table S2 The transcription factors induced by GV.(log₂FoldChange>1.5)

Gene id	Locus Names	Gene_name	log ₂ FoldChange
838467	At1g18860	WRKY61	4.154944
826708	At4g11070	WRKY41	3.284362
816726	At2g21900	WRKY59	3.129090
831147	At5g13080	WRKY75	2.731508
819248	At2g46400	WRKY46	2.033432
836602	At5g64810	WRKY51	1.943350
844423	At1g80840	WRKY40	1.834195
825775	At4g04450	WRKY42	1.790545
831826	At5g10900	WRKY62	1.741529
844398	At1g80590	WRKY66	1.729935
818669	At2g40740	WRKY55	1.645343
828481	At4g23810	WRKY53	1.632624
825435	At3g62610	MYB11	5.033301
842957	At1g66390	MYB90	3.881552
842955	At1g66370	MYB113	3.755247
819332	At2g47190	MYB2	3.125961
839219	At1g26780	MYB117	2.755653
821904	At3g23250	MYB15	2.194089
841218	At1g48000	MYB112	1.773851
843804	At1g69020	MYB31	1.645950
818902	At2g43000	NAC042	3.159705
832299	At5g22380	NAC090	2.588656
841722	At1g52890	NAC019	2.131126
819562	At3g04070	NAC047	1.908843
840317	At1g34180	NAC016	1.699634
816209	At2g17040	NAC036	1.607708

820512	At3g13220	ABCG26	4.988130
825269	At3g60970	ABCC15	3.993031
821902	At3g23240	ERF1	3.880447
835447	At5g53660	GRF7	1.624781

Supplementary Table 3

Table S3 List of primers used in the experiments.

Primer	5'-----3'
qPCR primer	
UBQ10-F	CACACTCCACTTGGTCTTGCGT
UBQ10-R	TGGTCTTTCCGGTGAGAGTCTCA
GI-F	AGTCGTTGCTTATGTTGA
GI-R	GCTTCTCAGTTGATGGAT
FT-F	CTACAACTGGAACAACCTT
FT-R	AACACGACACGATGAATT
CO-F	ATAGAGTTGTTCCGCTTA
CO-R	ATTGTCGTTGTAGTGAGT
TSF-F	ATTCATCGTATTGTGTTG
TSF-R	AAGACCAAGATTGTAGAT
SOC1-F	ATGAAGAGAATAGAGAATG
SOC1-R	TTAGTATGCCTCAGATAA
LFY-F	AGATAGCGGAGTTAGGTT
LFY-R	GACTATTCATCATCTCTTCAAG
AP1-F	AAGAGGATAGAGAACAAG
AP1-R	AAGAATCAGTGGAGTATT
WRKY41-F	CAGCTTCAGGGTTCGTCTTC
WRKY41-R	ATCAGGCGCAAGCTCTATCG

WRKY53-F	GACGGGGATGCTACGGTTT
WRKY53-R	TTTTGGGTAATGGCTGGTTTG
WRKY61-F	GTGCAGCTTACGGCAACATT
WRKY61-R	GGATCGAAAGATGACCCGGC
WRKY59-F	TCACAAGTGTTTCGAGCCCAG
WRKY59-R	CAGAAGGGCTTGGGTGGTTA
WRKY46-F	CATCACATCCCCGAAGACGA
WRKY46-R	TTCGGACTTGGTCGGTTTCA
WRKY75-F	ATATGGCCAAAAGGCCGTCA
WRKY75-R	TGCTCGAAGTTTTTCGGTGGA
WRKY55-F	GTCGTCTCAAGGAACGGAGG
WRKY55-R	AGCGCCGGATCTTTCTACTG
WRKY66-F	AGACCATCAAAACCTCTCCGC
WRKY66-R	TCGCAGTTTTGGTCTTTCGC
WRKY62-F	CAACCCCGATCTACCACGAC
WRKY62-R	CTGGTCCTTGGTGTAGGCAC
WRKY42-F	GTCCTGTTCGCAAGCAAGTG
WRKY42-R	ATGTTCATAGCCGCAGGAGG
WRKY40-F	AACCGCCACATCTCTCATGG
WRKY40-R	TGGGCTCGTCACTTTCTTCG
WRKY51-F	ACGGGTCATCGAGTTGCATT
WRKY51-R	TCACCGAGCAACCTTCACTT
FLC-F	GGCTAGCCAGATGGAGAATAATCA
FLC-R	CACCGGAAGATTGTCGGAGA
TFL1-F	CCAAGGCCAAGCATAGGGAT
TFL1-R	CCAAGATCATACTCGACCGCA
BCS1-F	GAGATCAAAGAGCACCGCCT
BCS1-R	AGGCACACATGGAAGACGTT
CYP703A2-F	AGGCACACATGGAAGACGTT

CYP703A2-R	CGGTTGCTTGATCGCTTCAG
ERF1-F	CCAGGACACGGGGAAGTATG
ERF1-R	TCACAGTTTCACCAGTCGCA
JRG21-F	TGACCATTCTCTTGCCGGAC
JRG21-R	ATGGAAAATAAAACAGTCACCTGAA
LBD1-F	ACTATTGCACACCGCGTCTT
LBD1-R	GGCACCTGCACATCCATACA
PR1-F	ACGCAGAACAATAAGAGGCA
PR1-R	ACCCAGGCTAAGTTTTCCC
Mutant verification primer	
LBa1.3	ATTTTGCCGATTCGGAAC
<i>wrky41</i> -LP	GAAAGGTTCCAGGATCTCCAG
<i>wrky41</i> -RP	GGGGAAGCCTGTGTTAATCTC
<i>wrky53</i> -LP	TCAGGCACGACTTAGAGAAGC
<i>wrky53</i> -RP	GGGAAAGTTGTGTCAATCTCG
CRISPR-Cas9 guide oligo	
LFY-oligo 1	GATTGAGACGATTGCAAGAAGAGG
LFY-oligo 2	AAACCCTCTTCTTGCAATCGTCTC
WRKY41-oligo 1	GATTGTCTCAACAAATACTTCCAC
WRKY41-oligo 2	AAACGTGGAAGTATTTGTTGAGAC
WRKY53-oligo 1	GATTGGCCATTACCCAAAAGCCAA
WRKY53-oligo 2	AAACTTGGCTTTTGGGTAATGGCC
SOC1-oligo 1	GATTGAGTGACTTTCTCCAAAAGA
SOC1-oligo 2	AAACTCTTTTGGAGAAAGTCACTC
CRISPR-Cas9 sequence primer	
WRKY41-F	GATCCCACTTCCAGAGAAACGAGAAAC
WRKY41-R	TTAATCTCAAGAATATTCAATACTGTACTAC
LFY-F	GACTTGGTGGTTTAGAGGGACTATT
LFY-R	GAAAGTCGGG CATAGAAATGTTGAGAA

WRKY53-F	CAGATGCACACATCGTAGCACACAAA
WRKY53-R	CTCTCGCTGATCATTACTTACTAGTTACT
SOC1-F1	ACCTACTCTCTTTGATTCATATATGAAATG
SOC1-R1	ATAAGAGGGTATATGTACTTGATACTAC
GST tag protein primer	
WRKY53-F	CGGAATTC ATGTTACCAAAGTGGTCAGA
WRKY53-R	CCGCTCGAGTTATGGCTTT TGGGTAATGG
WRKY41-F	ACGCGTCGACCGATGTTGCCAAAGTGGACA GAG
WRKY41-R	CCGCTCGAGTTAGGCCCTGAGATTCTGGT
EMSA primer	
EMSA-LFY-1-F	GAAACTGAGGGAGTGAGACAGTCAAATA AAACAGACTGAGAGCA
EMSA-LFY-1-R	TGCTCTCAGTCTGTTTTATTTTGACTGTCTCA CTCCCTCAGTTTC
EMSA-LFY-2-F	TCTTTCTGTTATTTAATAAATTTGACATTAC CAAAAAAAAAATTT
EMSA-LFY-2-R	AAATTTTTTTTTTGGTAATGTCAAATTTATT AAATAACAGAAAGA
EMSA-LFY-3-F	TTTATATTCCTACGTGTCAAATTATGAATGG TCATAATCAGAGTAGAGAA
EMSA-LFY-3-R	TTCTCTACTCTGATTATGACCATTCATAATT TGACACGTAGGAATATAAA
EMSA-LFY-4-F	TGTCGATGAAAGAAAAGTTTGACTTGTTA AGTCCCAACTGTC
EMSA-LFY-4-R	GACAGTTGGGACTTAACAAGTCAAACTTTT TCTTTCATCGACA
EMSA-LFY-5-F	ACTTGTTAAGTCCCAACTGTCAATTTCCCAG CAAGACACAT

EMSA-LFY-5-R	ATGTGTCTTGCTGGGAAATTGACAGTTGGG ACTTAACAAGT
EMSA-SOC1- F	TGAAAGGAGGTTGCATCCTTCA
EMSA-SOC1- R	GGTAGATCAATGGTGCAACCA
EMSA-SOC1-CK-F	ACACACAAATAGATGAAACGAGG
EMSA-SOC1-CK-R	CGATTGGCTAAAAGGGTTTGATA
Luc primer	
SOC1-Luc-F	AACTGCAGCCTGAAGCATAGCCTGGTTCTA
SOC1-Luc-R	CGGGATCCTCAATGGTGCAACCACCTCA
LFY-Luc-F	AACTGCAGTGTGAAAATGATACTGAGAAAA TAGG
LFY-Luc-R	CGGGATCCTGTAAAAATGACCACTCGAGCA AC
W41-SK-F	GCTCTAGAATGTTGCCAAAGTGGACAGAG
W41-SK-R	CGGAATTCTTAGGCCCTGAGATTCTGGT
W53-SK-F	GCTCTAGAATGTTACCAAAGTGGTCAGA
W53-SK-R	CGGAATTCTTATGGCTTTTGGGTAATGG
