



a

b

Figure S1. Special phenomena of stem bulblets above the ground in nature.

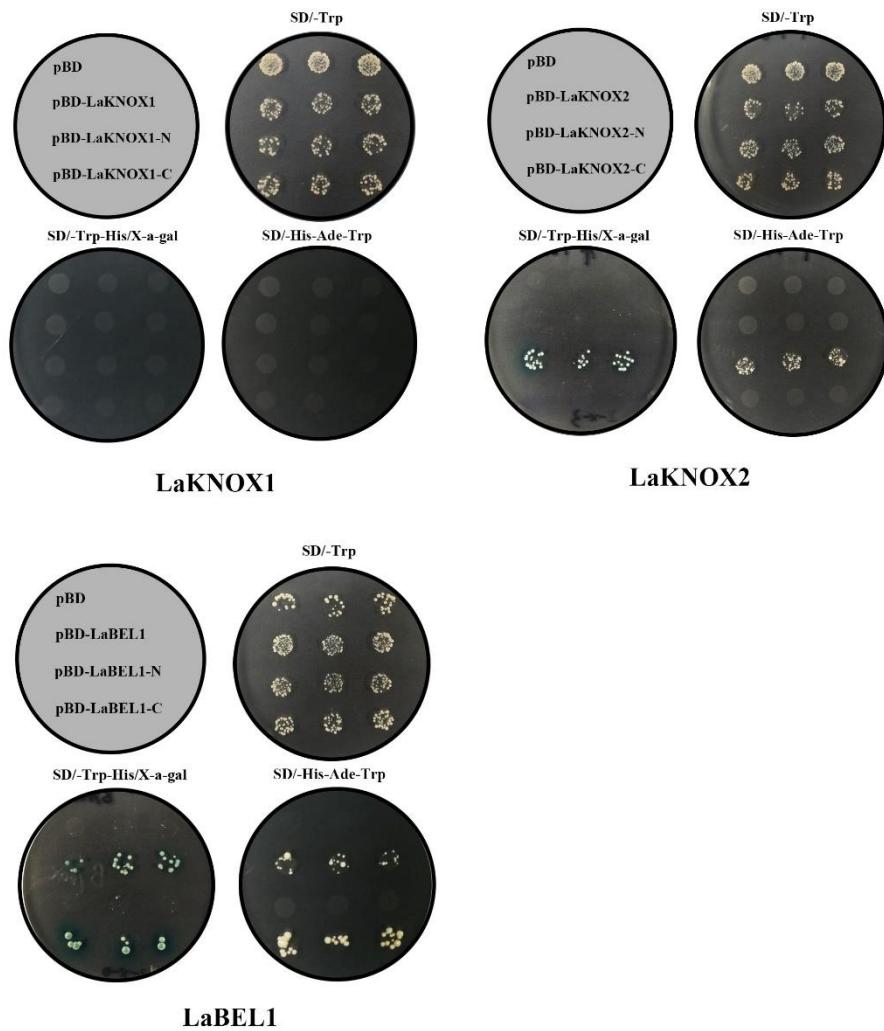


Figure S2. Transactivation assay of LaKNOX1, LaKNOX2, and LaBEL1 from *L. 'Aladdin'*.

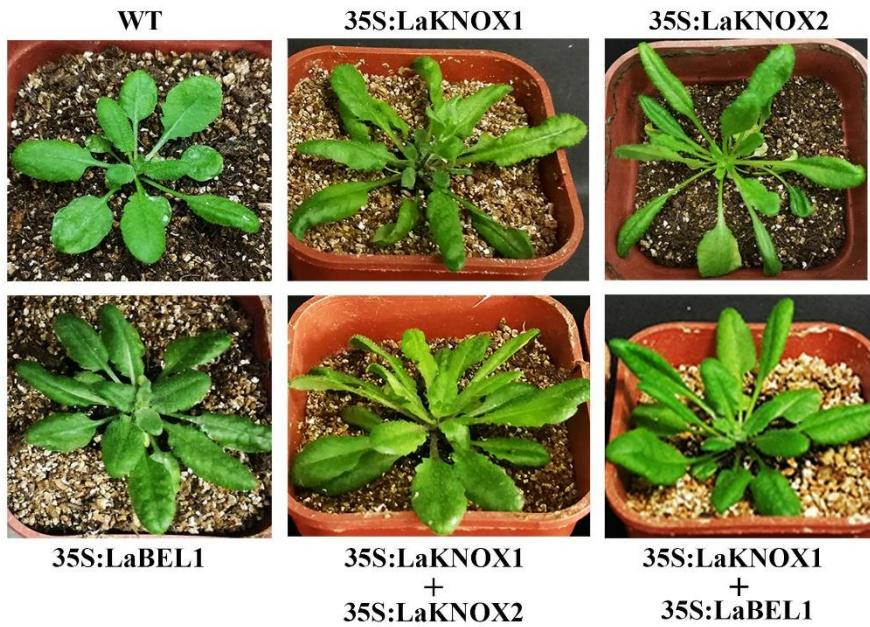


Figure S3. Transgenic Arabidopsis plants overexpressing *LaKNOX1*, *LaKNOX2*, and *LaBEL1* genes.

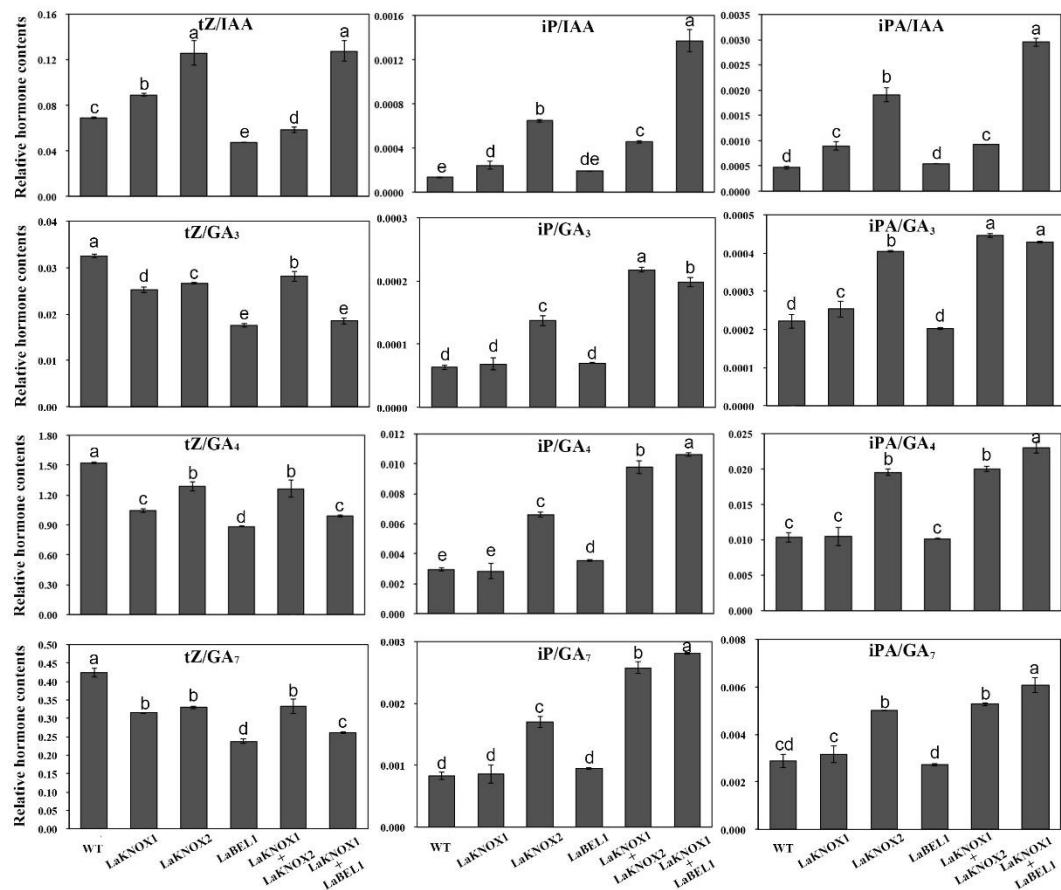


Figure S4. Relative hormone concentrations in transgenic Arabidopsis.

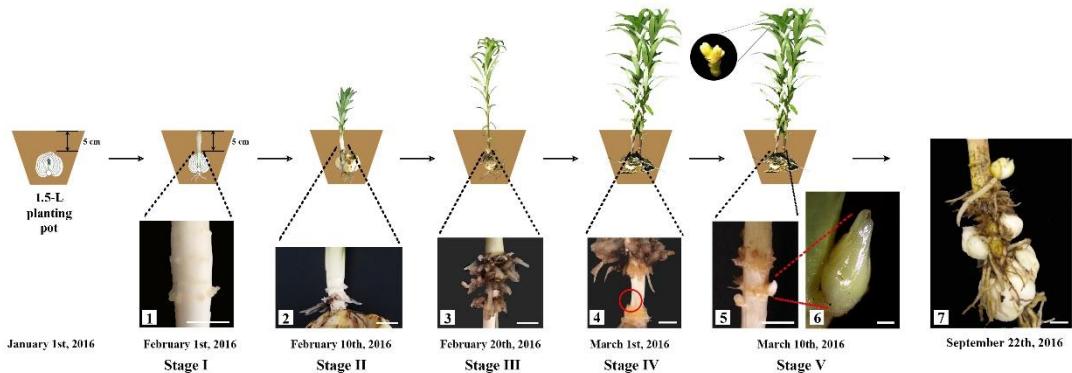


Figure S5. Division of stages in the process of underground stem bulblet formation in *L. 'Aladdin'*.

Table S1. Primers used in this study.

Primer name	Primer sequence (5'- 3')	Purpose
LaKNOX1-Y-F	AGAAGAAAGGCAATCTCCCAA	Primers for RT-PCR and qRT-PCR assay of LaKNOX1
LaKNOX1-Y-R	GAAAGCCATCCATTACAACAAA	Primers for RT-PCR and qRT-PCR assay of LaKNOX1
LaKNOX2-Y-F	CTGCTACCGCTTACTCCGATGA	Primers for RT-PCR and qRT-PCR assay of LaKNOX2
LaKNOX2-Y-R	CCACCAGTCCAATAACGCCAAT	Primers for RT-PCR and qRT-PCR assay of LaKNOX2
LaBEL1-Y-F	CTTTTCGAGCAGTTCCTTCAC	Primers for RT-PCR and qRT-PCR assay of LaBEL1
LaBEL1-Y-R	TTGGTTCTCCACATACATC	Primers for RT-PCR and qRT-PCR assay of LaBEL1
LaBEL1-M-F	TCCGGCGCAGGAGCTGTTGAAT	Amplification for the partial sequence of LaBEL1
LaBEL1-M-R	TCGACATCGCTTGATACGGGT	Amplification for the partial sequence of LaBEL1
LaBEL1-3' GSP	AGGGAGCAGTAGGGCGAACACC	Primers for the LaBEL1 3' RACE analysis
LaBEL1-5' GSP	TATGACGCCGCATCTACGGGTTACC	Primers for the LaBEL1 5' RACE analysis
UPM	GGGCAAGCAGTGGTATCAACGCAGAGT	RACE universal primer
LaBEL1-F	ATGGATCATGAAGGATTCGGGTATGGCG	Amplification for the cDNA sequences of LaBEL1
LaBEL1-R	CTACCCCTGCAAGATCATGCAGCAGCTGA	Amplification for the cDNA sequences of LaBEL1
LaKNOX1-XbaI	CATTACGAACGATA <u>ACTCGAG</u> ATGGATGGCTTCACCCATCTCAGTG	Primers for subcellular localization of LaKNOX1
LaKNOX1-SalI	CACCATCACTAGTAC <u>CTCGAC</u> CGCCAGGGCGTATGTAC	Primers for subcellular localization of LaKNOX1
LaKNOX2-XbaI	CATTACGAACGATA <u>ACTCGAG</u> ATGGATCATGAAGGATTGGGTATGGCG	Primers for subcellular localization of LaKNOX2
LaKNOX2-SalI	CACCATCACTAGTAC <u>CTCGAC</u> AGGACCAATTGTACCCGTATC	Primers for subcellular localization of LaKNOX2
LaBEL1-XbaI	CATTACGAACGATA <u>ACTCGAG</u> ATGGATCATGAAGGATTGGGTATGGCG	Primers for subcellular localization of LaBEL1

LaBEL1-	CCCTTGCTCACCATCG <u>TACTAGT</u> CCCTGCAAGATCATGCAGCAGCTGA	Primers for subcellular localization of LaBEL1
<i>SpeI</i>		
LaKNOX1-	CATTTACGAACGATA <u>CTCGAGA</u> TGGATGGCTTCACCCATCTCAGTG	Primers for subcellular localization of LaKNOX1 N-terminus
N- <i>Xba</i> I		
LaKNOX1-	CACCATCACTAGTAC <u>GTCGAC</u> GCACAACGAGTTGAGCTGTGATTG	Primers for subcellular localization of LaKNOX1 N-terminus
N- <i>Sal</i> I		
LaKNOX1-	CATTTACGAACGATA <u>CTCGAG</u> TCTGATGGTGTTCACCTCGCATCG	Primers for subcellular localization of LaKNOX1 C-terminus
C- <i>Xba</i> I		
LaKNOX1-	CACCATCACTAGTAC <u>GTCGAC</u> CGGGCCCAGGCGGTATGTAC	Primers for subcellular localization of LaKNOX1 C-terminus
C- <i>Sal</i> I		
LaKNOX2-	CATTTACGAACGATA <u>CTCGAG</u> ATGGGGACTTGTACAGTATA	Primers for subcellular localization of LaKNOX2 N-terminus
N- <i>Xba</i> I		
LaKNOX2-	CACCATCACTAGTAC <u>GTCGAC</u> GAGTGCCAGATTGTCAACATC	Primers for subcellular localization of LaKNOX2 N-terminus
N- <i>Sal</i> I		
LaKNOX2-	CATTTACGAACGATA <u>CTCGAG</u> GTGGTACGAATCTGGCACTT	Primers for subcellular localization of LaKNOX2 C-terminus
C- <i>Xba</i> I		
LaKNOX2-	CACCATCACTAGTAC <u>GTCGAC</u> AGGACCAATTGTACCCGTATC	Primers for subcellular localization of LaKNOX2 C-terminus
C- <i>Sal</i> I		
LaBEL1-N-	CATTTACGAACGATA <u>CTCGAG</u> ATGGATCATGAAGGATTGGGTATGGCG	Primers for subcellular localization of LaBEL1 N-terminus
X- <i>Xba</i> I		
LaBEL1-N-	CACCATCACTAGTAC <u>GTCGAC</u> CTCTCTCCATAGCCTTTCTGTTGCC	Primers for subcellular localization of LaBEL1 N-terminus
<i>Sal</i> I		
LaBEL1-C-	CATTTACGAACGATA <u>CTCGAG</u> GATCCTACGGAGCAGGGAGCAGTA	Primers for subcellular localization of LaBEL1 C-terminus
X- <i>Xba</i> I		
LaBEL1-C-	CACCATCACTAGTAC <u>GTCGAC</u> CCCTGCAAGATCATGCAGCAGCTGA	Primers for subcellular localization of LaBEL1 C-terminus
<i>Sal</i> I		
LaKNOX1-	ATGGCCATGGAGGCC <u>GAATT</u> CATGGATGGCTTCACCCATCTCAGTG	Primers for transactivation analysis and Y2H to BD of LaK-NOX1 full length
<i>Eco</i> RI		
LaKNOX1-	CCGCTGCAGGTCGAC <u>GGAT</u> CCCGGGCCCAGGCGGTATGTAC	Primers for transactivation analysis and Y2H to BD of LaK-NOX1 full length
<i>Bam</i> HI		
LaKNOX2-	ATGGCCATGGAGGCC <u>GAATT</u> CATGGGGACTTGTACAGTATA	Primers for transactivation analysis and Y2H to BD of LaK-NOX2 full length
<i>Eco</i> RI		
LaKNOX2-	CCGCTGCAGGTCGAC <u>GGAT</u> CCAGGACCAATTGTACCCGTATC	Primers for transactivation analysis and Y2H to BD of LaK-NOX2 full length
<i>Bam</i> HI		
LaBEL1-	ATGGCCATGGAGGCC <u>GAATT</u> CATGGATCATGAAGGATTGGGTATGGCG	Primers for transactivation analysis of LaBEL1 full length
<i>Eco</i> RI		
LaBEL1-	CCGCTGCAGGTCGAC <u>GGAT</u> CCCCCTGCAAGATCATGCAGCAGCTGA	Primers for transactivation analysis of LaBEL1 full length
<i>Bam</i> HI		
LaKNOX1-	ATGGCCATGGAGGCC <u>GAATT</u> CATGGATGGCTTCACCCATCTCAGTG	Primers for transactivation analysis and Y2H to BD of LaK-NOX1 N-terminus
N- <i>Eco</i> RI		
LaKNOX1-	CCGCTGCAGGTCGAC <u>GGAT</u> CCGCACAACGAGTTGAGCTGTGATTG	Primers for transactivation analysis and Y2H to BD of LaK-NOX1 N-terminus
N- <i>Bam</i> HI		
LaKNOX1-	ATGGCCATGGAGGCC <u>GAATT</u> CTCTGATGGTGTTCACCTCGCATCG	Primers for transactivation analysis and Y2H to BD of LaK-NOX1 C-terminus
C- <i>Eco</i> RI		

LaKNOX1-	CCGCTGCAGGTCGACCGGAT <u>CCCCGGCCCAGGCGGTATGTAC</u>	Primers for transactivation analysis and Y2H to BD of LaKNOX1 C-terminus
C-BamHI		
LaKNOX2-	ATGCCATGGAGGCC <u>GAATTCA</u> TGGGGACTTGACAGTATA	Primers for transactivation analysis of LaKNOX2 N-terminus
N-EcoRI		
LaKNOX2-	CCGCTGCAGGTCGACCG <u>GATCC</u> AGTGCCAGATTGTCAACATC	Primers for transactivation analysis of LaKNOX2 N-terminus
N-BamHI		
LaKNOX2-	ATGCCATGGAGGCC <u>GAATT</u> CGATGTTGACGAATCTGGCACTT	Primers for transactivation analysis and Y2H to BD of LaKNOX2 C-terminus
C-EcoRI		
LaKNOX2-	CCGCTGCAGGTCGACCG <u>GATCC</u> AGGACCAATTGTACCCGTATC	Primers for transactivation analysis and Y2H to BD of LaKNOX2 C-terminus
C-BamHI		
LaBEL1-N-	ATGCCATGGAGGCC <u>GAATT</u> CATGGATCATGAAGGATTGGGTATGGCG	Primers for transactivation analysis of LaBEL1 N-terminus
EcoRI		
LaBEL1-N-	CCGCTGCAGGTCGACCG <u>GATCC</u> CTCTCCATAGCCTTTTCGTT-	Primers for transactivation analysis of LaBEL1 N-terminus
BamHI	GCC	
LaBEL1-C-	ATGCCATGGAGGCC <u>GAATT</u> CGATCCTACGGGAGCAGGGAGCAGTA	Primers for transactivation analysis of LaBEL1 C-terminus
EcoRI		
LaBEL1-C-	CCGCTGCAGGTCGACCG <u>GATCC</u> CCCTGCAAGATCATGCAGCAGCTGA	Primers for transactivation analysis of LaBEL1 C-terminus
BamHI		
LaKNOX2-	GCCATGGAGGCC <u>GAATT</u> CATGGGGACTTGACAGTATA	Primers for Y2H to AD of LaKNOX2 full length
AD-EcoRI		
LaKNOX2-	CAGCTCGAGCT <u>GATGG</u> ATCCAGGACCAATTGTACCCGTATC	Primers for Y2H to AD of LaKNOX2 full length
AD-BamHI		
LaKNOX2-	GCCATGGAGGCC <u>GAATT</u> CGATGTTGACGAATCTGGCACTT	Primers for Y2H to AD of LaKNOX2 C-terminus
C-AD-EcoRI		
LaKNOX2-	CAGCTCGAGCT <u>GATGG</u> ATCCAGGACCAATTGTACCCGTATC	Primers for Y2H to AD of LaKNOX2 C-terminus
C-AD-BamHI		
LaBEL1-N-	GCCATGGAGGCC <u>GAATT</u> CATGGATCATGAAGGATTGGG-	Primers for Y2H to AD of LaBEL1 N-terminus
AD-EcoRI	TATGGCG	
LaBEL1-N-	CAGCTCGAGCT <u>GATGG</u> CCCTCTCCATAGCCTTTTCGTT-	Primers for Y2H to AD of LaBEL1 N-terminus
AD-BamHI	GCC	
LaBEL1-N-	CAGCTCGAGCT <u>GATGG</u> ATCCGGCACCCAGACTG-	Primers for Y2H to AD of SKY domain in the N-terminal re-gion of LaBEL1
SKY-AD-	CAGAATTCAATTCAAC	
BamHI		
LaBEL1-N-	GCCATGGAGGCC <u>GAATT</u> CTAAACCCGTAGATGCGCGTCG-	Primers for Y2H to AD of BELL domain in the N-terminal region of LaBEL1
BELL-AD-	TACAGT	
EcoRI		
LaBEL1-	TGGCGGCC <u>ACTAGTGG</u> ATCCATGGATCATGAAGGATTGGGTATGGCG	Primers for BiFC of LaBEL1 full length
YNB-BamHI		
LaBEL1-	CTCCATCCGGGAGCGGTACCCCTGCAAGATCATGCAGCAGCTGA	Primers for BiFC of LaBEL1 full length
YNB-KpnI		
LaBEL1-N-	CTCCATCCGGGAGCGGT <u>ACC</u> CTCTCCATAGCCTTTTCGTTGCC	Primers for BiFC of LaBEL1 N-terminus
YNB-KpnI		
LaBEL1-N-	TGGCGGCC <u>ACTAGTGG</u> ATCCATGGATCATGAAGGATTGGGTATGGCG	Primers for BiFC of SKY domain in the N-terminal region of LaBEL1
SKY-YNB-		
BamHI		

LaBEL1-N-	CTCCATCCCGGGAGC <u>CGGTACCGGCACCCAGACTG</u>	Primers for BiFC of SKY domain in the N-terminal region of LaBEL1
SKY-YNE-	CAGAATTCAATTCAAC	
<i>KpnI</i>		
LaBEL1-N-	TGGCGGCC <u>ACTAGTGGATCCTAAACCCGTAGATGCGGCGTCG</u>	Primers for BiFC of BELL domain in the N-terminal region of LaBEL1
BELL-YNE-	TACAGT	
<i>BamHI</i>		
LaBEL1-N-	CTCCATCCCGGGAGC <u>CGGTACCCCTCTCTCCCAGCCTTTCGTTGCC</u>	Primers for BiFC of BELL domain in the N-terminal region of LaBEL1
BELL-YNE-		
<i>KpnI</i>		
LaBEL1-C-	TGGCGGCC <u>ACTAGTGGATCCGATCCTACGGGAGCAGGGAGCAGTA</u>	Primers for BiFC of LaBEL1 C-terminus
YNE- <i>BamHI</i>		
LaKNOX1-	GCTGGGCC <u>CAGGCCTACTAGTATGGATGGCTTCACCCATCTCAGTG</u>	Primers for BiFC of LaKNOX1 full length
YCE- <i>SpeI</i>		
LaKNOX1-	CTCCTACCCGGGAG <u>CGGTACCCGGGCCAGGCGGTATGTAC</u>	Primers for BiFC of LaKNOX1 full length
YCE- <i>KpnI</i>		
LaKNOX1-	CTCCTACCCGGGAG <u>CGGTACCGCACAAACGAGTTGAGCTGTGATTG</u>	Primers for BiFC of LaKNOX1 N-terminus
N-YCE- <i>KpnI</i>		
LaKNOX1-	GCTGGGCC <u>CAGGCCTACTAGTTCTGATGGTGGTTCACCTCGCATCG</u>	Primers for BiFC of LaKNOX1 C-terminus
C-YCE- <i>SpeI</i>		
LaKNOX2-	GCTGGGCC <u>CAGGCCTACTAGTATGGGGACTTGTACAGTATAACA</u>	Primers for BiFC of LaKNOX2 full length
YCE- <i>SpeI</i>		
LaKNOX2-	CTCCTACCCGGGAG <u>CGGTACCAGGACCAATTGTACCCGTATC</u>	Primers for BiFC of LaKNOX2 full length
YCE- <i>KpnI</i>		
LaKNOX2-	TGGCGGCC <u>ACTAGTGGATCCATGGGGACTTGTACAGTATAACA</u>	Primers for BiFC of LaKNOX2 full length
YNE- <i>BamHI</i>		
LaK-		
NOX2-	CTCCATCCCGGGAG <u>CGGTACCAGGACCAATTGTACCCGTATC</u>	Primers for BiFC of LaKNOX2 full length
YNE- <i>KpnI</i>		
LaKNOX2-	CTCCTACCCGGGAG <u>CGGTACCAGTGCCAGATTGTCAACATC</u>	Primers for BiFC of LaKNOX2 N-terminus
N-YCE- <i>KpnI</i>		
LaKNOX2-	GCTGGGCC <u>CAGGCCTACTAGTGTGTTGACGAATCTGGCACTT</u>	Primers for BiFC of LaKNOX2 C-terminus
C-YCE- <i>SpeI</i>		
LaKNOX2-	CTCCATCCCGGGAG <u>CGGTACCAGTGCCAGATTGTCAACATC</u>	Primers for BiFC of LaKNOX2 N-terminus
N-YNE- <i>KpnI</i>		
LaKNOX2-		
C-YNE-	TGGCGGCC <u>ACTAGTGGATCCGATGTTGACGAATCTGGCACTT</u>	Primers for BiFC of LaKNOX2 C-terminus
<i>BamHI</i>		
LaKNOX1-	<u>GGATCC</u> ATGGATGGCTTCACCCATCTC	Primers for overexpression vector construction
<i>BamHI</i>		
LaKNOX1-	<u>GAATTCT</u> CACGGGCCAGGCGGTATGT	Primers for overexpression vector construction
<i>EcoRI</i>		
LaKNOX2-	<u>TCTAGA</u> ATGGGGACTTGTACAG	Primers for overexpression vector construction
<i>XbaI</i>		
LaKNOX2-	<u>GAGCTCT</u> CAAGGACCAATTGTACC	Primers for overexpression vector construction
<i>SacI</i>		

LaBEL1-	<u>TCTAGAATGGATCATGAAGGATTGGGTATGGCG</u>	Primers for overexpression vector construction
XbaI		
LaBEL1-	<u>CCCGGGTACCTGCAAGATCATGCAGCAGCTGA</u>	Primers for overexpression vector construction
SmaI		
35S	GACGCACAATCCCCTACTATC	Universal primer
AtACTIN2-	TCCTCTTAACCCAAAGGCCAACAGA	Reference gene in Arabidopsis
F		
AtACTIN2-	TGAGACACACCATCACCAATCCA	Reference gene in Arabidopsis
R		

Single underlines are enzyme recognition site.

Table S2. NCBI accession numbers of other BELL proteins used in multiple sequence alignment and phylogenetic tree analysis.

Name	Species	NCBI Accession Number
JrBEL1	<i>Juglans regia</i>	XP_018852535.1
PmBEL1	<i>Prunus mume</i>	XP_008238940.1
AcBEL	<i>Ananas comosus</i>	OAY81307.1
CpBEL1	<i>Carica papaya</i>	XP_021887927.1
PtBEL1	<i>Populus trichocarpa</i>	XP_024447318.1
PdBEL1	<i>Phoenix dactylifera</i>	XP_008794768.1
PpBEL1	<i>Prunus persica</i>	XP_007210325.1
RcBEL1	<i>Ricinus communis</i>	XP_015571681.1
PaBEL1	<i>Prunus avium</i>	XP_021820869.1
AtBEL1	<i>Arabidopsis thaliana</i>	sp Q38897.2
AtATH1	<i>Arabidopsis thaliana</i>	sp P48731.1
AtBEL1	<i>Arabidopsis thaliana</i>	sp Q38897.2
AtBLH1	<i>Arabidopsis thaliana</i>	sp Q9SJ56.1
AtBLH2/SAW1	<i>Arabidopsis thaliana</i>	sp Q9SW80.3
AtBLH3	<i>Arabidopsis thaliana</i>	sp Q9FWS9.1
AtBLH4/SAW2	<i>Arabidopsis thaliana</i>	sp Q94KL5.2
AtBLH5	<i>Arabidopsis thaliana</i>	sp Q8S897.2
AtBLH6	<i>Arabidopsis thaliana</i>	sp O65685.1
AtBLH7/PNY	<i>Arabidopsis thaliana</i>	sp Q9SIW1.1
AtBLH8/PNF	<i>Arabidopsis thaliana</i>	sp Q9SJ3.1
AtBLH9	<i>Arabidopsis thaliana</i>	sp Q9LZM8.1
AtBLH10	<i>Arabidopsis thaliana</i>	sp Q9FXG8.1
AtBLH11	<i>Arabidopsis thaliana</i>	sp Q1PFD1.1
StBEL5	<i>Solanum tuberosum</i>	AF406697
MDH1	<i>Malus domestica</i>	NP_001315679.1
GmBLH4	<i>Glycine max</i>	XP_006574714
WBLH2	<i>Triticum aestivum</i>	BAJ04687.1

TaqSH1/WBLH4	<i>Triticum aestivum</i>	BAJ04690.1
qSH1	<i>Oryza sativa Japonica Group</i>	XP_015641948.1
