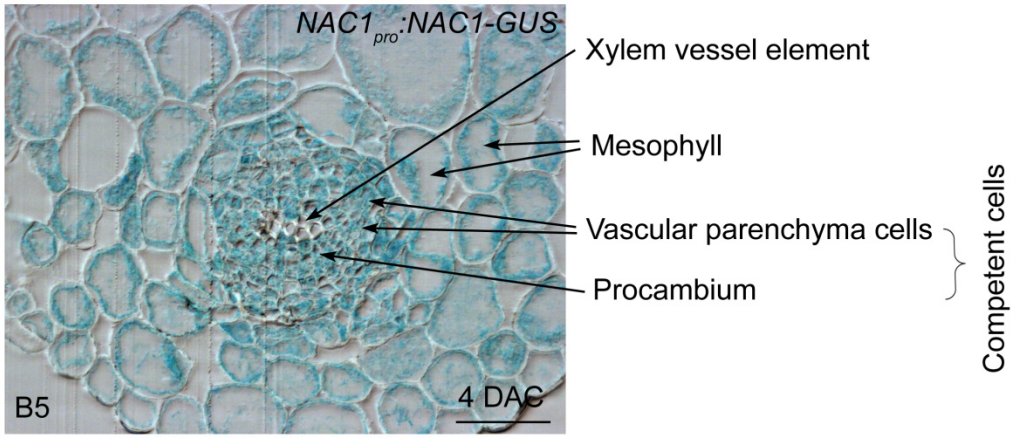
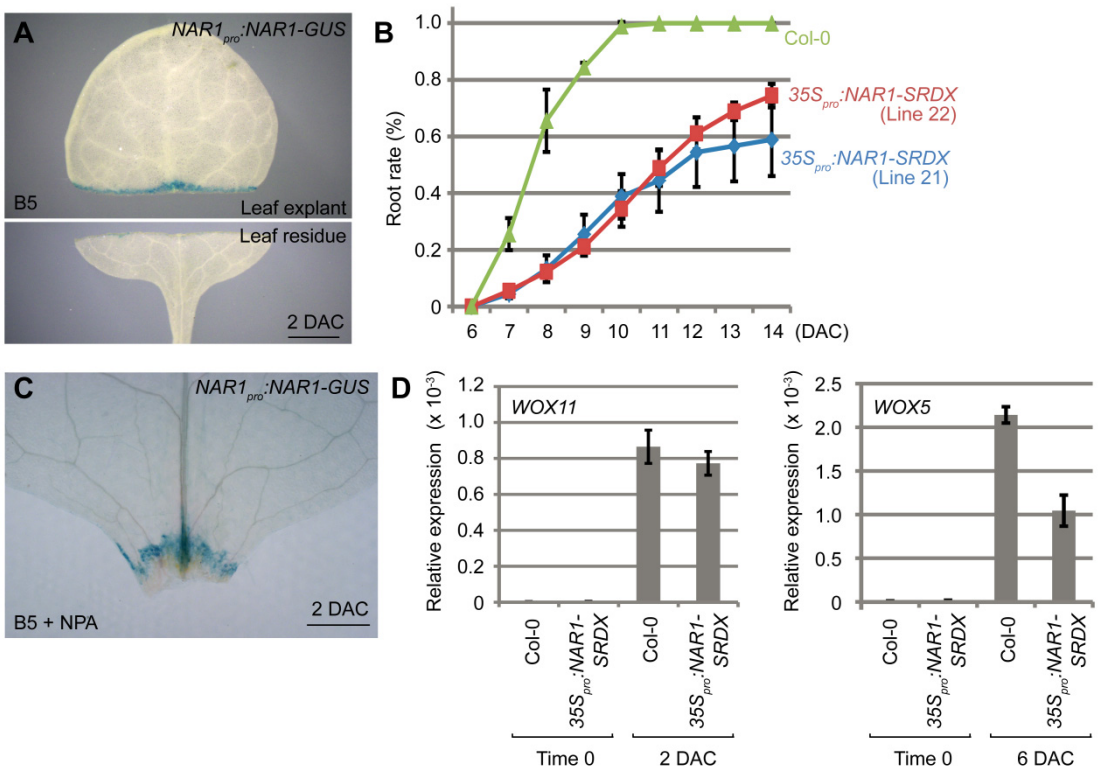
Supplementary data



Supplemental Figure S1. *NAC1* expression in the leaf explant.

Thin sectioning of 4-DAC leaf explants from *NAC1*$_{pro}$*:NAC1-GUS* cultured on B5 medium at the wounded region, showing the midrib of vasculature.

Scale bars, 50 μm.



Supplemental Figure S2. *NAR1* in *de novo* root organogenesis.

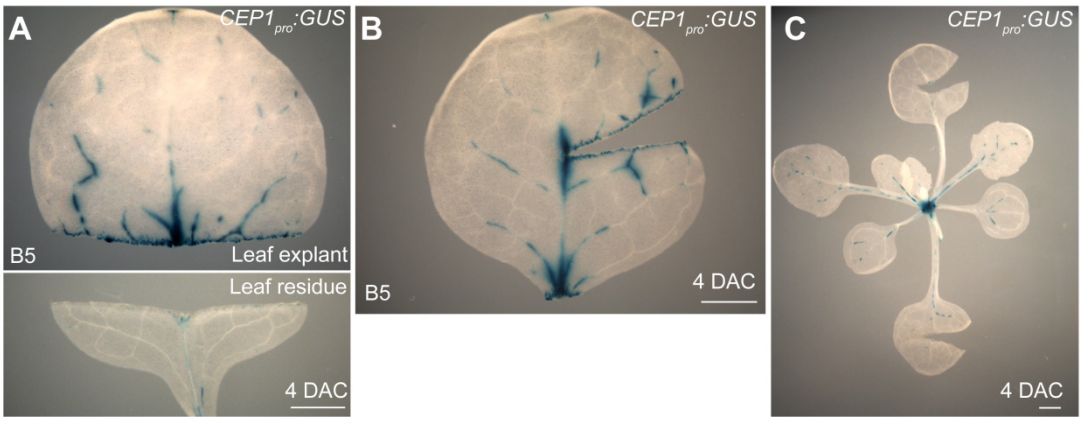
(A) GUS staining in leaf explant (upper panel) and wounded leaf residue (lower panel) of *NAR1*$_{pro}$*:NAR1-GUS* at 2 DAC.

(B) Rooting rate analyses of leaf explants from Col-0 and *35S*$_{pro}$*:NAR1-SRDX*. Bars show SD from three biological repeats, n = 30 in each repeat.

(C) GUS staining of *NAR1*$_{pro}$*:NAR1-GUS* in leaf explant at 2 DAC cultured on B5 medium containing NPA.

(D) qRT-PCR analysis of *WOX11* and *WOX5* transcript levels in leaf explants from Col-0 and *35S*$_{pro}$*:NAR1-SRDX*. *WOX5* was upregulated in *35S*$_{pro}$*:NAR1-SRDX* leaf explants at 6 DAC, although the upregulation level is lower than that in the wild-type leaf explants. This might be caused by the arrest of the process from root apical meristem formation to root tip emergence in *35S*$_{pro}$*:NAR1-SRDX*. Bars show SD from three PCR experiments. Results were confirmed in two biological repeats. Data from one biological repeat are shown.

Scale bars, 1 mm in (A) and 500 μm in (C).



Supplemental Figure S3. *CEP1* expression responds to wounding of leaf explant.

(A) GUS staining of *CEP1*$_{pro}$*:GUS* leaf explant (upper panel) and wounded leaf residue (lower panel) at 4 DAC

(B) Large wound on leaf explant from *CEP1*$_{pro}$*:GUS* cultured on B5 medium, showing GUS signal in wounded region.

(C) Large wound on seedling of *CEP1*$_{pro}$*:GUS*, showing no GUS signal in wounded region.

Scale bars, 1 mm in (A-C).

Supplemental Table S1. RNA-seq analysis of genes expressed in response to wounding.

Supplemental Table S2. RNA-seq analysis of genes upregulated in *pER8:3×FLAG-NAC1*.

Supplemental Table S3. List of primers used in this study.

Experiments	**Primers**	**Sequence (5' →3')**
Molecular cloning		
$NAC1_{pro}$:NAC1-GUS	$NAC1_{pro}$:NAC1-F1	ccgctcgagGAGTCTGATCATAGGCACACG
	$NAC1_{pro}$:NAC1-R1	gaagatctGCAATTCCAAACAGTGCTTG
$NAR1_{pro}$:NAR1-GUS	$NAR1_{pro}$:NAC1-F1	acgcgtcgacGGAGAGAAGTGGCAATGAGAG
	$NAR1_{pro}$:NAC1-R1	gctctagaGTAATTCCATGCATGGCTTG
$CEP1_{pro}$:GUS	$CEP1_{pro}$:GUS-F1	ccgctcgagTGTTATAATCTGATTAGACTAA
	$CEP1_{pro}$:GUS-R1	tcccccgggATTTTTCTATGGTGATTTTTGTATTTACTTGTG
$EXT1_{pro}$:GUS	$EXT1_{pro}$:GUS-F1	acgcgtcgacGTAGGATTTTGATGGCAGTGTG
	$EXT1_{pro}$:GUS-R1	cgggatccTGTGTTATGTGTTTTGCTTTGTG
$NAC1_{pro}$:NAC1-SRDX	$NAC1_{pro}$:NAC1-SRDX-F1	ccgctcgagGAGTCTGATCATAGGCACACG
	$NAC1_{pro}$:NAC1-SRDX-R1	ccaatgcattggttctgcagTCA*AGCGAAACCCAAACGGAGTTCTAGATCCAGATCGAG*GCAATTCCAAACAGTGCTTG
$35S_{pro}$:NAC1-SRDX	$35S_{pro}$:NAC1-SRDX-F1	gaagatctATGGAGACGGAAGAAGAG
	$35S_{pro}$:NAC1-SRDX-R1	acgcgtcgacTCA*AGCGAAACCCAAACGGAGTTCTAGATCCAGATCGAG*GCAATTCCAAACAGTGCTTG
$35S_{pro}$:NAR1-SRDX	$35S_{pro}$:NAR1-SRDX-F1	tcccccgggATGGAGGAGACAGAAAAGAATAAG

	$35S_{pro}$:NAR1-SRDX-R1	acgcgtcgacGTAATTCCATGCATGGCTTG
pER8:CEP1	pER8:CEP1-F1	ccgctcgagATGAAGCGATTTATTGTTCTTGC
	pER8:CEP1-R1	tccgggcccTTAGAGTTCATCCTTAAGCGAGTCC
pER8:CEP2	pER8:CEP2-F1	ccgctcgagATGAAGAAACTTCTTTTGATATTTC
	pER8:CEP2-R1	tccgggcccCTAGAGCTCATCTTTGACATCAC
pER8:3×Flag-NAC1	pER8:3×Flag-NAC1-F1	acgcgtcgac*ATGGACTACAAAGACCATGACGGTGATTATAAAGATCATGATATCGATTACAAGGATGACGATGACAAGgggcc*ATGGAGACGGAAGAAGAGATGAAGG
	pER8:3×Flag-NAC1-R1	gactagtTCAGCAATTCCAAACAGTGCTTG
qRT-PCR		
ACTIN	ACT-F	TGGCATCA(T/C)ACTTTCTACAA
	ACT-R	CCACCACT(G/A/T)AGCACAATGTT
NAC1	NAC1-qRT-F1	CATCCTCCCAATCATTCTCTG
	NAC1-qRT-R1	GAATGAGTCGAGGCCTGTGA
NAR1	NAR1-qRT-F2	ATACGCAACAGGCTACAGAACA
	NAR1-qRT-R2	TGTCGGTCAATTGGCTCTCT
WOX11	WOX11-F3	CGCAACCACCAACACTTGTGACC
	WOX11-R6	AAGACATCTGTTGCATCACC
WOX5	WOX5-RT-F	GTGAAAGGTCGAAGCTTACG
	WOX5-RT-R	GTACTGGTTATTGCCTCTAGC
CEP1	CEP1-qRT-F1	GACTCACAAGTGAGCTAGTG
	CEP1-qRT-R1	CTACTACCGCAACTCCATGG

CEP2	CEP2-qRT-F1	CGTGCTTGTGACGATAGATG
	CEP2-qRT-R1	CACACCATGGTTCAGCTCTG

Note that lower case letters represent additional nucleotides to introduce restriction sites, and the italic letters indicate SRDX or 3×FLAG.