

Supplementary Tables:

CBL-interacting protein kinase 25 contributes to root meristem development

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Table S1: Primers used in this study.

Table S2. A list of auxin- and cytokinin- responsive elements in CIPK25 (AT5G25110.1) promoter sequence

Table S1: Primers used in this study.

	Primer	Sequence
1	LBb1	5'-GCGTGGACCGCTTGCTGCAACT-3'
2	<i>cipk25-1</i> LP	5'-AACAAATTCATCATCATGGCG-3'
3	<i>cipk25-1</i> RP	5'-TCCAACAATTAATCTCAGCCG-3'
4	<i>cipk25-2</i> LP	5'- TTGGATAATTGGTTTGGATCG -3'
5	<i>cipk25-2</i> RP	5'- CGAAGTTCTTTAACGCGTTTG -3'
6	PRMCIPK25/FP	5'-CGGGATCCGGCCTAGAGGTATCTAACTT-3'
7	PRMCIPK25/RP	5'-CGGGATCCCATGTGTATATACAGAAGTA-3'
8	CIPK254T2F	5'-TCCCCCGGGATGGGATCCAAACTTAAACT-3'
9	CIPK254T2R	5'-TCCCCCGGGTTAGCAGTCACTACCAGAAT
10	CIP25SDM/L	5'-GGTTTGCTTCATGATCAGTGTGGAACT-3'
11	CIP25SDM/R	5'-AGTTCCACACTGATCATGAAGCAAACC-3'
12	CIPK25CFY	5'-GGAATTCCATATGGCGATTATGCGAACACCGTG-3'
13	CIPK25RY	5'-GGAATTCCATATGTTAGCAGTCACTACCAGAAT-3'
14	CIPK25FY	5'-GGAATTCCATATGGGATCCAAACTTAAACT-3'
15	CBL1F	5'-GGAATTCCATATGGGCTGCTTCCACTCAA-3'
16	CBL1R	5'-CGGAATTCTCATGTGGCAATCTCATCGA-3'
17	CBL2F	5'-GGAATTCCATATGTCGCAGTGC GTTGACGG-3'
18	CBL2R	5'-CGGAATTCTCAGGTATCTTCAACCTGAG-3'
19	CBL3F	5'-GGAATTCCATATGTCGCAGTGCATAGACGG-3'
20	CBL3R	5'-CGGAATTCTCAGGTATCTTCCACCTGCG-3'
21	CBL4F	5'-GGAATTCCATATGGGCTGCTCTGTATCGAA-3'
22	CBL4R	5'-CGGAATTCTTAGGAAGATACGTTTTGCA-3'
23	CBL5F	5'-GGAATTCCATATGGGATGTGTTTGCAGCAA-3'
24	CBL5R	5'-CGGAATTCTTACCGGAGAAAGTTGGGA-3'
25	CBL6F	5'-GGAATTCCATATGATGATGCAATGTTTAGA-3'
26	CBL6R	5'-CGGAATTCTCATCCATCCAGCTCACTAG-3'
27	CBL7F	5'-GGAATTCCATATGGATTCAACAAGAAATTC-3'
28	CBL7R	5'-CGGAATTCTCAGGTATCTTCCACTTGCG-3'
29	CBL8F	5'-GGAATTCCATATGTTGGCATTTCGTGAAATG-3'
30	CBL8R	5'-CGGAATTCCTAGTCTTCAACTTCAGAGT-3'
31	CBL9F	5'-GGAATTCCATATGGGTTGTTTCCATTCCAC-3'
32	CBL9R	5'-CGGAATTCTCACGTCGCAATCTCGTCCA-3'
33	CBL10F	5'-CGGGATCCATATGGAACAAGTTTCCTCT-3'
34	CBL10R	5'-CGAGCTCGTCAGTCTTCAACCTCAGTGT-3'

35	AtCIPK25prom 2.6k FP	5'-CGGGATCCTATCAAAAGTCTGGGTCAAAC-3'
36	AtCIPK25prom 2.6k RP	5'-CGGGATCCGTGTATATACAGAAGTAGAATG-3'
37	AtSHY2 prom 2.6k FP	5'-ACGCGTTCGACGTGGTGGTTAGATTGAAGTG-3'
38	AtSHY2 prom 2.6kRP	5'-GCTCTAGACCCTTCTTCAAGAATTGCAGGAG-3'
39	CAMCIPK25/L	5'-CCCATGGGGATGGGATCCAAACTTAAACT-3'
40	CAMCIPK25/R	5'-GACTAGTTTAGCAGTCACTACCAGAAT-3'
41	Act2 F RT	5'-TCAGATGCCCAGAAGTCTTGTTTC-3'
42	Act2 R RT	5'-GTGGATTCCAGCAGCTTCCA-3'
43	AtCIPK25 F RT	5'-CCAGCGTTGGAGGAGATAGTGT-3'
44	AtCIPK25 R RT	5'-CAGTCACTACCAGAATTTTCATCACTAA-3'
45	ARR1 RT F	5'-TGCTAACCTCTTCGCAATCATC-3'
46	ARR1 RT R	5'-TCTCGGAAATGCGGTTTGA-3'
47	SHY2 RT N F	5'-CGGGAACAGATAATGTATGTGAA-3'
48	SHY2 RT N R	5'-TGTTGTTATTACAGCAAGAAACTCTC-3'
49	PIN1 RT F	5'-CACTTCATCGCCGCTAACA-3'
50	PIN1 RT R	5'-GAATCTGCGGCGAGGAAAC-3'
51	PIN2 RT F	5'-CCGTGGGGCTAAGCTTCTCATCT-3'
52	PIN2 RT R	5'-AGCTTTCGGTCGTCTCCTATCTCC-3'
53	PIN3 RT F	5'-GAAAATCTTCTCACCCGACCAA-3'
54	PIN3 RT R	5'-GGCGAAGATGGCGACAAA-3'
55	PIN7 RT F	5'-CGGCATAAACCGCTTCGT-3'
56	PIN7 RT R	5'-TTGAGGAGATGAAGTGGAAAGAGA-3'
57	ARF5 RT F	5'-GCCACGTAGAGCTGCAGAGAA-3'
58	ARF5 RT R	5'-TGGCGGCTGTGCTGAGT-3'
59	ARF6 RT F	5'-CGCGCCATCTTCCAACA-3'
60	ARF6 RT R	5'-CGTCACAGTTCCCGTTGCT-3'
61	ARF7 RT F	5'-TGACGGTGATTCCAGGAACA-3'
62	ARF7 RT R	5'-AGGCACAAAGCCATTATCAACA-3'
63	ARF8 RT F	5'-GTGCATCAAATGGGAGATCATG-3'
64	ARF8 RT R	5'-TCGGGTTTTGCGGGAAT-3'
65	ARF19 RT F	5'-TGGAGGACTGTGGCCAAT-3'
66	ARF19 RT R	5'-ACCCTCGTTTTTGAACCTTTGTAT-3'
67	AtCIPK25prom SmaI FP	5'-TCCCCCGGGTATCAAAAGTCTGGGTCAAAC-3'
68	AtCIPK25 SmaI RP	5'-TCCCCCGGGTTAGCAGTCACTACCAGAAT-3'
69	AtCIPK25F-attB1	5'-GGGGACAAGTTTGTACAAAAAAGCAGGCTTCATGGG ATCCAAACTTAAACTTTAC-3'
70	AtCIPK25F-attB2	5'-GGGGACCACTTTGTACAAGAAAGCTGGGTTGCAGTC ACTACCAGAATTTTCATCAC-3'

Table S2. A list of auxin- and cytokinin- responsive elements in CIPK25 (AT5G25110.1)

promoter sequence

-2116

AATGTGTAATTAGTGAACCTTGAACTTTTGAAAAATAATTTGAAATATCTCGTTA
TACGATTAATTATATGAAAATTCATAGAAAATGTGATGCTAATAGGAATATAGCA
ATTTGGGGGAAAAATCTAATGAAAAAGGATTTTATGAACTTCATATATTATTAC
TATTTTTTGTAAACATGAAATTTGGAGTGACTTCAAACAAATTA AAAATATGAA
ATCTCCCATATATACAACATCAACGTAAAAAAACAAAAAAAAGCCTCATT
GCCTCGTTATCGTCGGATTCTATCGTATTGATCTCTTCATGGTAGTCTCCATTATT
CATCTTGACCATTTCGTTGTTCTCATGTCTCTCTTAATCTCCGGTTAAGCTCTGATT
CTCACTTTGATCTCTTGTTTCGATCTTTCTACTATTATTATTGCATTTACTATTTAAA
ATTTTATATCCTAGTAGTTGGATCTCTAATCTCTTATTAACAAATTATTGACGTAG
ATGACAAAAAATAAAAAAATCATTGACGTTAATCTTACACATTATGTTCTGTG
AGGTAGTAGAACAATTTTGGAGGTAACACTTTTCTTTCACAGTTGTTGTCTTCGTC
AAAACATATGGGCTAGAGGTATCTAACTTTTGATACGAAAATTCTCCTTAGCAGC
ATTTTAAAAAATCATAAGAGCCCACTGAATCTCAAGCCTTTTATAATCATTAG
AATATATTTGATATTTATTA AAAAGCCCACTAATTTTAAAATCCACCAAAAATAATC
AAAATCCTTAATCCAATAGACCCTTAAATAGTTAAATTATTTAGAACTCTAACA
AATCTTTTATTTAACAACCTTCCTAAGCTTAAAGTTTGTAATTGTTTTGTATTTTT
CCCAAAGTTTTAGTATCTTGATATTTTAAAGATCGTTCTATAAATAGATTTGATTTT
GTAAGTTGTTTATATTGTTACTAGGCCTTTGTATAAATACCAAATACTTTGATTAT
TTTTTTACTGATTTTCATGTCAAACAAAATTCCAAACAACCTTAAAGGAAAAAGCTT
ACTCGATTGGAATAAAAATTGTACGTTTAAACAAAATGATATTAGTGAAATAAATA
AACCAGCTCAACATTTAAGGATTTCTACGTGTATATACAGTAATCGTGTTTAGTA
TTAATTAGCTATAGTTTAGCCTCAAAAAACAAAGATCCAAAACAACATGACGAA
ATTGACTTCCACATCGTGTCCCTTCTCGTCGACATAAAAACCTTTAATATATAGATG
CATGTATAAGTATACTCACTATTTGTGTCATTAGTATTTTCTTTTTTGATACTTGG
AGCTAATGACAAAAATCCGCTAGAAATATCTTCTCCAACGATAGCTACAAACA
AATACTACCATTGCGTCATCATCACTTATTTATATTCGATATTTTCAGTCAACAACA
CTAATCTCTTTCACCAAAATCTTTGGACTATTATTACAAATGAATTA AAAACTTG
GACCCTTAATAACATATTTGTTTCATTAAATCTATACAACTCTTATTA AAAATGAT
ATTTTCTTAAATCAAAAATTAATCAAAAATTAAGGTAGGCTCTAGAGGATTGCATC
ATTTGCCACCCACATTAGCCTGCCATTATTATTGGACGGTAACAAATTTCTTAC
ACCAATAAATGGTAAGTTACAATTATTATTAACATTTCTATATA AAAATAGTTTGG
TTATTTACATTAATTTTTATTTAATACTATAAACTTAAAAATTC AATGCTGAAAAG
TGTAACGAAAGAGGGACATTAATATATGTTAATATAATAAGTATATTTACTAT
TTAAAAAAGACTTATGTAAATACATATTGTATAGAGAGAAAAATAACCCATAGT
ATAAAAACCTTGCATCTCTAAAACCGCAGCATTGATAATAAGAGTCTCTTTCTTCT
TAAGTATCTCTTAATTAACCCACATAATATATTTACAAGTGGCCGCCTCATA CAT
CCCCTCTCAAGTCCTTTGCTTCATTTCTTATA AAAACTAAACCACCTTCTTCTTCAT
CATTCATCAACCAATCTATCTCATATTCCATATACTGAATATGGACTCATTCTACTT
CTGTATATACAC

TFs	Position	Strand	Sequence	Similar Score	
ARF1	-1646	+	TGTCTc	1	Auxin Responsive
ARF2	-1646	+	TGTCTc	1	
ARF9	-1646	+	TGTCTc	1	
ARF10	-1646	+	TGTCTc	1	
ARF11	-1646	+	TGTCTc	1	
ARF12	-1646	+	TGTCTc	1	
ARF13	-1646	+	TGTCTc	1	
ARF16	-1646	+	TGTCTc	1	
ARF17	-1646	+	TGTCTc	1	
ARF18	-1646	+	TGTCTc	1	
ARF21	-1646	+	TGTCTc	1	
ARF23	-1646	+	TGTCTc	1	
ARR1	-1311	+	actGAATCtc	0.981	Cytokinin Responsive
ARR2	-1103	+	tagtATCTTg	0.974	
ARR2	-806	-	aAAGATccaa	0.953	
ARR12	-1878	-	AATCT	1	
ARR12	-1864	+	GGATT	1	
ARR12	-1781	-	AATCT	1	
ARR12	-1712	+	GGATT	1	
ARR12	-1636	-	AATCT	1	
ARR12	-1530	-	AATCT	1	
ARR12	-1469	-	AATCT	1	
ARR12	-1307	-	AATCT	1	
ARR12	-1242	-	AATCC	1	
ARR12	-1223	-	AATCC	1	
ARR12	-1216	-	AATCC	1	
ARR12	-1069	+	AGATT	1	
ARR12	-873	+	GGATT	1	
ARR12	-558	-	AATCT	1	
ARR12	-543	-	AATCT	1	
ARR12	-477	-	AATCT	1	
ARR12	-404	+	GGATT	1	
ARR12	60	-	AATCT	1	
ARR14	-1311	+	actgAATCTc	0.982	
ARR14	-1070	-	tAGATTgat	0.978	
ARR18	-1375	+	gaggTATCTaact	0.942	
ARR18	-1104	+	ttagTATCTgat	0.947	
ARR18	-63	+	taagTATCTetta	0.942	
ARR19	-1878	-	AATCT	1	
ARR19	-1864	+	GGATT	1	
ARR19	-1781	-	AATCT	1	
ARR19	-1712	+	GGATT	1	

ARR19	-1636	-	AATCT	1	_____
ARR19	-1530	-	AATCT	1	
ARR19	-1469	-	AATCT	1	
ARR19	-1307	-	AATCT	1	
ARR19	-1242	-	AATCC	1	
ARR19	-1223	-	AATCC	1	
ARR19	-1216	-	AATCC	1	
ARR19	-1069	+	AGATT	1	
ARR19	-873	+	GGATT	1	
ARR19	-558	-	AATCT	1	
ARR19	-543	-	AATCT	1	
ARR19	-477	-	AATCT	1	
ARR19	-404	+	GGATT	1	
ARR19	60	-	AATCT	1	
