

Fig. S1. WAG1 and WAG2 do not regulate hypocotyl elongation in the dark. Hypocotyl lengths of 4-day-old skotomorphogenic seedlings. Lengths are expressed relative to the wild-type control ($n\geq 32$).

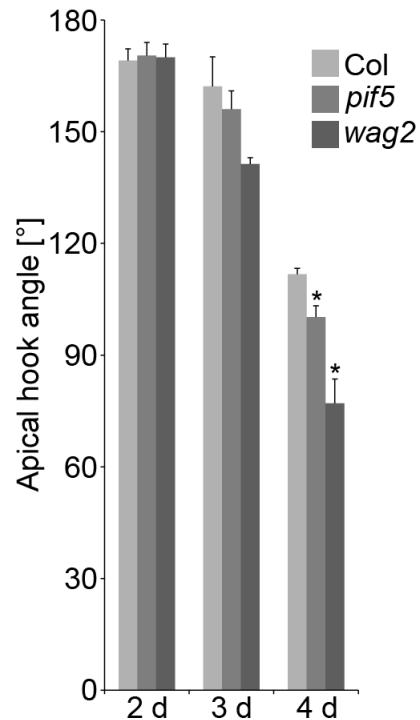


Fig. S2 Apical hook opening of wag2 and pif5 single mutants. Quantification of the apical hook angle of 2, 3 and 4 day (d)-old dark-grown seedlings of the wild-type and *pif5* as well as *wag2* mutants. Shown are the averages and the standard deviations of two biological replicates using minimum 20 seedlings per genotype per experiment. Asterisks indicate the significance (Student's *t*-test: * $0.01 < P < 0.05$) in comparison with the wild type at the specific time point.

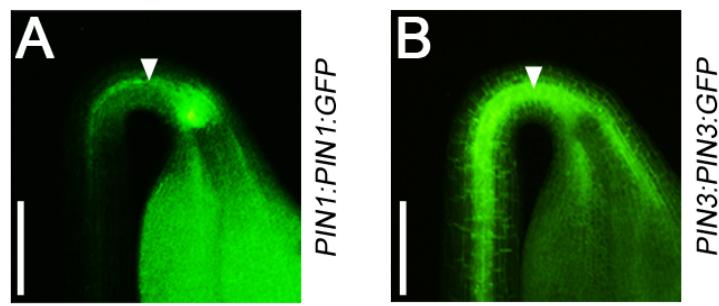


Fig. S3. Expression domains of PIN1:GFP and PIN3:GFP in the apical hook. Epifluorescence images of the apical hooks of *PIN1:PIN1:GFP* (A) and *PIN3:PIN3:GFP* (B) -expressing 3.5-day-old *Arabidopsis* seedlings. Arrowheads indicate the stele of the apical hook. Note that these strong fluorescence signals in the inner tissues were not detectable using confocal microscopy. Scale bar: 200 μm .

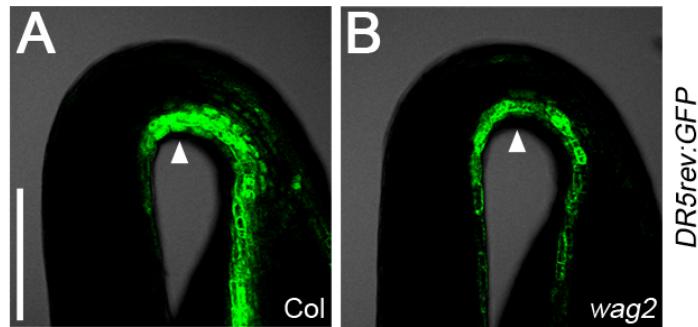


Fig. S4. Confocal images of the cotyledons of *DR5rev:GFP*-expressing 2-day-old skotomorphogenic wild-type and *wag2* seedlings. Arrowheads mark the expression maximum in the apical hook. Scale bar: 200 μm .

Table S1. List of primers used in this study

ChIP			
AT4G37770	ACS8	ACS8 FP	ATCGGAAATTCACATCGTGCCTA
		ACS8 RP	GATGTCAGAGAAGAACATGAGCACGT
AT1G49240	ACT8	ACT8 LP	GCAGCATGAAGATTAAAGGTCGTG
		ACT8 RP	TGTGGACAATGCCTGGACCTGCT
AT3G14370	WAG2	WAG2 GboxI LP	GGCCCACAGATATGTGATTAG
		WAG2 GboxI RP	TCAAAATATTAGAGGGATT CGC
AT3G14370	WAG2	WAG2 CDS 3a	GCGAATCTTGC GGAAAGAGTCACG
		WAG2 CDS 5a	CTGACACCGATCTGATCTCAGC
Genotyping			
LBb1.3		LBb1.3	ATTTGCCGATTCGGAAC
AT1G70940	PIN3	pin3-4 LP	TGCCACCTTCATTCAAAAAC
		pin3-4 RP	TGATTTCTTGAGACCGATGC
AT1G53700	WAG1	WAG1-Asa	CTATCAAATCCTGGCTTCAACC
		WAG1-Sa	CGATCTCAGCTTACCTCCACAG
AT3G14370	WAG2	WAG2 5a	CTGACACCGATCTGATCTCAGC
		WAG2-Asa	CCGTTACAGGCTCTGCCGCAAAC
GST constructs			
GST:WAG2(in)		attB1 WAG2	GGGG attB1 T CATGGAAC AAGAAGATTCTATTTC
		attB2 WAG2	GGGG attB2 T AAACCGCGTTGCGACTCGC
GST:WAG2in		WAG2mut5a	GATT CGCTT AGAGGT CATCGACCG
		WAG2mut3a	CGGTCGATGACCTCTAAAGCGAATC
GST:PIN1		PIN1LOOP FW	GGGG attB1 GAGTACCGTGGAGCTAAGCTTTG
		PIN1LOOP RV	GGGG attB2 AGTTGGATTACGAATAAGTTTC
GST:PIN2		PIN2LOOP FW	GGGG attB1 GAGTCCGTGGGCTAAGCTTCATCTC
		PIN2LOOP RV	GGGG attB2 AGGGTTCGAATGAGTTCTCAAACCCA
GST:PIN3		PIN3LOOP FW	GGGG attB1 TTT CGTGGCGCCAAGATGCTC
		PIN3LOOP RV	GGGG attB2 TAAGT GTTGGTTCTGATGAGTTTC
GST:PIN4		PIN4LOOP FW	GGGG attB1 TCGAGTACCGTGGCGCTAAGCTTCT
		PIN4LOOP RV	GGGG attB2 CTGCAGTCAGTTGGTTCTGATCAGCTT
GST:PIN7		PIN7LOOP FW	GGGG attB1 TCGAATACGAATACAGAGGAGCTAAGATCTG
		PIN7LOOP RV	GGGG attB2 TTAGTTGGTTCTATGAGTTCCCTC
Promoter GUS constructs			
WAG1 _{pro} :GUS		WAG1+7	CTTCATGGTTCCGGTGAA
		WAG1-2565	TAAAATAATTATACTATGGAATTCCACATA
WAG2 _{pro} :GUS		WAG2+13	CTTCTTGTCCATGGTTTCTTCTG
		WAG2-2901	CGTAATATAAAAGAATTCTAACTAAG
Quantitative real-time PCR			
AT2G38120	AUX1	AUX1 3a	CATGCATAATCTAACAGTAAC
		AUX1 5a	CCAGTAACATTATTACATAAACG

AT5G55910	D6PK	D6PK 3a	CGAATTCTTCGACAAGCCTCGG
		D6PK 5a	GTCCTGGTGGTATTGCATAC
AT4G26610	D6PKL1	D6PKL1 3a	CACATGTCCATCATCTCTAACAG
		D6PKL1 5a	GCAATGAAGGTTATGGACAAAGG
AT5G47750	D6PKL2	D6PKL2 3a	CAGAGAGCATTATATGTCCGTC
		D6PKL2 5a	CTTGGATCATCCATTCTCCC
AT3G27580	D6PKL3	D6PKL3 3a	CCATAGCAAGAAGAACTTCAGC
		D6PKL3 5a	GCGAGGAAGAAGCTGTTAGAGC
AT3G50685		HKG 2step-LP	TTTAATCGGAGCGTTGGAAG
		HKG 2step-RP	TACAAAGACCAGCCCACGAT
AT5G01240	LAX1	LAX1 3b	CAGCCCATCAAGCACTTCAAACC
		LAX1 5b	GACGCCTGGTTAGCTGTGCATC
AT2G21050	LAX2	LAX2 3a	GAACCTCAAACCACTGAATGAC
		LAX2 5a	CTAAGCTATCTGACATGTTTG
AT1G77690	LAX3	LAX3 3b	GGTAGACGCGAATCCGAACG
		LAX3 5b	GGTGCTTACTTCACCGGAGCC
AT2G36910	PGP1	PGP1 3a	CGCCATGTAATGGATGAAATTAC
		PGP1 5a	GATGATGGAAGAAGTTCTCAAG
AT2G47000	PGP4	PGP4 3a	CCTCCTACAAATGTTGCTAGAAG
		PGP4 5a	CAAAGTCTCCAAAGTTGCTCTG
AT3G28860	PGP19	PGP19 3a	CAAGCTGCGAGAGGCCAAATAG
		PGP19 5a	GTCCTCGCTAACCTTGCTCAGC
AT3G45780	PHOT1	PHOT1 3a	GTTGGCATAGGAAGTTCTCG
		PHOT1 5a	CTACAAGGCCAGAGACTGATC
AT5G58140	PHOT2	PHOT2 3a	GATGCACGCTCGGTGAGCCTTG
		PHOT2 5a	GAGCTTCCAGATGCTAACCGC
AT2G34650	PID	PID 3a	GTCTAGCGAGACGAGTGAATCG
		PID 5a	CTCTCTCCGTATAGACAACCTC
AT2G26700	PID2	PID2 3a	CCATCATGTGGAGATACTCTAAGG
		PID2 5a	CATCGGAAGTGTGTACCTCTGCC
AT1G73590	PIN1	PIN1 2stp 3	TCATCGTCTTGTACCGAAACT
		PIN1 2stp 5	CCTCCAGGGAAATAGAACGACA
AT5G57090	PIN2	PIN2 2stp 3	GGTGGGTACGACGGAACA
		PIN2 2stp 5	GGCGAAGAAAGCAGGAAGA
AT1G70940	PIN3	PIN3 2stp 3	CCGGCGAAACTAAATTGTTG
		PIN3 2stp 5	CCCATGATCAATCTCACACG
AT2G01420	PIN4	PIN4 2stp 3	ATCAAGACCGCCGATATCAT
		PIN4 2stp 5	TTGTCTCTGATCAACCTCGAAA
AT1G23080	PIN7	PIN7 2stp 3	TCACCCAAACTGAACATTGC
		PIN7 2stp 5	TGGGCTCTGTTGCTTCA
AT5G25760	UBC21	UBC21 2step-LP	TCCTCTTAAC TGCGACTCAGG
		UBC21 2step-RP	GCGAGGC GTGTATACATTG
AT1G53700	WAG1	WAG1 2stp 3	AGATACTCCAAGGCGACGAG
		WAG1 2stp 5	GTTACCGATTTCCCCGGTTA
AT3G14370	WAG2	WAG2 2stp 3	CGAGGAGGCGAATGTACG
		WAG2 2stp 5	GACACCGATCTGATCTCAGC