

Supplementary Table 1. Oligonucleotide primers used in this study

At5G38550 promoter fragment	Forward primer: CCTGCAGCTGGAAAGAATCTAAGTGCCTAG Reverse primer: CGAGCTCCCTTGAACCTGATGTTATCAATATTC
At5G39110 promoter fragment	Forward primer: CCTGCAGCCATAAGCTATGGCTGTGGTTTTG Reverse primer: CGAGCTCCCTTTTCAAACAAAAGGTTATGCTAATCC
At4G04570 promoter fragment	Forward primer: CCTGCAGCCCATCTCCATAACTCTCTCG Reverse primer: CGAGCTCCCGTTTGTGTTTAAAGATAACAACCTC
At1G58602 promoter fragment	Forward primer: CCTGCAGCCTCACCACACAACTCTATATCAC Reverse primer: CGAGCTCCCTTTTGAATCTTGATCGCGCC Reverse primer for all (same as above for full-length promoter): CGAGCTCCCTTGAACCTGATGTTATCAATATTC
At5G38550 truncated promoter fragments	Forward primer for P- $\Delta$ TE1,2,3,4: CTGCAGATGTCACGTTGAAGTTGGTTTTATG Forward primer for P- $\Delta$ TE1,2,3: CTGCAGGAATGAATGACCAATGCTGAAGC Forward primer for P- $\Delta$ TE1,2: CTGCAGGAACAGTGAATACACTAAAACCTC Forward primer for P- $\Delta$ TE1,2: CTGCAGACCACTGGGTTTTCTATTTAAAAATAAG
Bisulfite primers for AT5G38550p:GUS	<b>Bisulfite region 1:</b> <u>Primary PCR</u> AT5G38550-Bi-F1 (GBis-F1): TTTTAAAGGYGGYATTGTAAAG AT5G38550-Bi-R1 (GBis-R1): TAAATTTTATACAATATTTCTC <u>Nested PCR</u> AT5G38550-Bi-F1 (GBis-F1): TTTTAAAGGYGGYATTGTAAAG AT5G38550-Bi-R2 (GBis-R2): TCTCAAACAATAAATCAAACCTC
	<b>Bisulfite region 2:</b> <u>Primary PCR</u> AT5G38550-Bi-F2 (GBis-F2): TTAYYGATGYAGAGATGGGAAG AT5G38550-Bi-R3 (GBis-R3): TRTRAAATAATTATTCAAARACTACC <u>Nested PCR</u> AT5G38550-Bi-F2 (GBis-F2): TTAYYGATGYAGAGATGGGAAG AT5G38550-Bi-R4 (GBis-R4): AARTACRTCTCCACAAACAAAC
	<b>Bisulfite region 3:</b> <u>Primary PCR</u> AT5G38550-Bi-F3 (023-Bi-F2): GYAGTYGTTYATYTTYAGAGG GUS-Bi-R1 (018-Bi-R1): CACCAACRCRATCAATTCCAC <u>Nested PCR</u> AT5G38550-Bi-F3 (023-Bi-F2): GYAGTYGTTYATYTTYAGAGG GUS-Bi-R2 (018-Bi-R2; Pro:GUS junction): CRATRAATTCRARTCRRTACCC
	<b>Bisulfite region 1:</b> <u>Primary PCR</u> LB-Bis-F1 (018-Bi-F1): GTGGYAGGATATATTGTGGTG AT4G04570p-Bi-R1 (025-Bi-R1): CRCRTCTTTRTTAACTTCCAAAC <u>Nested PCR</u> LB-Bis-F1 (018-Bi-F2): TGTAYTGAATTYTYATGTTTG AT4G04570p-Bi-R2 (025-Bi-R2): CAACAACRARTRATAAACATC AT4G04570p-Bi-R3 (025-Bi-R3): ARAAARARACACAACCTCTTTAC
	<b>Bisulfite region 2:</b> <u>Primary PCR</u> AT4G04570p-Bi-F1 (025-Bi-F1): AGAGGAAYYATTGTAAAATAG GUS-Bi-R1 (018-Bi-R1): CACCAACRCRATCAATTCCAC <u>Nested PCR</u> AT4G04570p-Bi-F2 (025-Bi-F2): GTYAATGGTYGTATGTGAATGG AT4G04570p-Bi-F3 (025-Bi-F3): YATTGAAAGATAAYTTGTG GUS-Bi-R2 (018-Bi-R2; Pro:GUS junction): CRATRAATTCRARTCRRTACCC
Bisulfite primers for AT4G04570p:GUS	

**Supplementary Table 2.** Number of primary transgenic lines obtained

Constructs	No lines in Col-0	No. lines in <i>rdd</i>
AT5G38550p:GUS	23	24
AT5G39110p:GUS	15	12
AT4G04570p:GUS	25	28
AT1G58602:GUS	16	14
P-ΔTE1:GUS	19	10
P-ΔTE1,2:GUS	16	14
P-ΔTE1,2,3:GUS	14	11
P-ΔTE1,2,3,4:GUS	18	22

**Supplementary Table 3.** Transcription factor-binding motifs identified in At5GTE55850

Cis-element	Family	Time of occurrence	Expression pattern of TF in AtGenExpress database
AHL12	AT-hook	9	Shoot apex and flowers
AHL20	AT-hook	12	<b>Root-specific</b>
AHL25	AT-hook	5	unrecorded
ARR11	GARP/ARR-B	5	<b>Root-preferential</b>
DOF2	C2C2 (Zn)	2	Constitutive
DOF5.7	C2C2 (Zn)	3	unrecorded
GT1	Trihelix	4	Constitutive
KAN1	GARP	2	Constitutive
RVE1	MYB	5	Constitutive
ZmHOX2a	HD-HOX	2	unrecorded