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Supporting Online Material for

A Role for RNAi in the Selective Correction of DNA Methylation Defects

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Correction: In Fig. S3 on page 7, the author has removed one "remethylatable sequence," leaving five (instead of six in the original figure) to match the results indicated in Tables S1 and S2. Also, Figure S9C from the original SOM is now Figure S10B, which is reflected in the main article's SOM citations.

Supporting Online Material

A role for RNAi in the selective correction of epigenetic defects

Felipe Karam Teixeira, Fabiana Heredia, Alexis Sarazin, François Roudier, Martine Boccara, Constance Ciaudo, Corinne Cruaud, Julie Poulain, Maria Berdasco, Mario F. Fraga, Olivier Voinnet, Patrick Wincker, Manel Esteller, Vincent Colot

This PDF file includes: Materials and Methods Figures S1 to S10 Legends of Figures S1 to S10 Tables S1 to S4 Legends of Tables S1 to S4 Supplemental References

Material and Methods

Plant Material

Plants were from the *A. thaliana* Col-0 accession. The *ddm1-2*, *met1-1*, *dcl2-1*, *dcl3-1*, *rdr2-1*, *nrpd1a-1*, and *nrpd1b-1* mutants have been previously described (*1-5*). The *ddm1-2* mutant plants used in this study were derived from a *ddm1/DDM1* plant stock that had been maintained in the heterozygous state by repeated backcrossing to a wild type Columbia line over six generations to remove EMS-induced mutations unlinked to *ddm1* (A kind gift from Eric Richards, Washington University, Saint Louis, MO, USA). Homozygous *ddm1/ddm1* progeny was subsequently selfed for four generations. Plants were grown under long-day conditions, either *in vitro* in liquid for 10-day-old seedlings (*6*), or in soil otherwise.

Analysis of DNA methylation and transcription

DNA and RNA were extracted from seedlings, rosette leaves, stems and inflorescences using DNeasy and RNeasy Qiagen kits, respectively.

Digestion with the McrBC enzyme (New England Biolabs), which cuts methylated DNA, was followed by quantitative PCR (McrBC-qPCR) with specific primer pairs. Digestion was carried out using 500 ng of genomic DNA. Quantitative PCR was performed on equal amounts (2.5 ng) of digested and undigested DNA samples, using an ABI 7900 machine and Eurogentec SYBR green I MasterMix Plus. Primers are listed in Table S1. Results were expressed as percentage of molecules lost through McrBC digestion (Table S2). Most *ddm1*-hypomethylated sequences (47 out of 55) were chosen within the ~500 kb, repeat-rich interval that forms the heterochromatic knob on the short arm of chromosome 4, and were thus expected to be inherited as a single block. As controls, sequences

from 14 known genes or single copy unannotated regions that are unmethylated in wt and *ddm1* were included in the analysis, together with five sequences that are equally methylated in the two genetic backgrounds (Table S1).

Sodium bisulfite sequencing was performed as previously described (7). Primer sequences for bisulfite sequencing analysis were designed using Methyl Primer Express® software v1.0 and are listed in Table S3.

Reverse transcription (RT) was performed on 1 μ g of total RNA using an oligodT primer and Superscript II (Invitrogen). Quantitative PCR was performed as described above on 1/40 of the RT reaction. Results were expressed as percentage of expression relative to the mean value obtained for three genes (*At2g36060*; *At4g29130*; *At5g13440*) with invariant expression over hundreds of publicly available microarray experiments. All primers used are listed in Tables S1 and S4.

Small RNA Isolation, Cloning, and 454 Sequencing

Small RNA isolation, gel purification and cloning were performed as previously described (8), using 200 µg RNA from wt and *ddm1* seedlings. Libraries were sequenced using 454 Life Sciences pyrosequencing technology (71 623 reads for wt, and 176 257 reads for *ddm1*). Sequence reads were matched against the Arabidopsis genome using MUMmer v3.0 software (9). Only small RNA sequences with perfect matches over their entire length (15-30 nt) were analyzed further (31 878 reads in wt and 76 753 reads in *ddm1*; GEO accession number: GSE13419). Sequences were characterized using the TAIR7 release of the Arabidopsis genome annotation (<u>www.arabidopsis.org</u>), together with a novel annotation of transposable elements (<u>http://urgi.versailles.inra.fr/gbrowse/cgi-bin/gbrowse/atha/</u>). miRNAs were identified using miRBase (April 11th, 2008 http://microrna.sanger.ac.uk/) and the ASRP database (May, 2008;

http://asrp.cgrb.oregonstate.edu/db/download.html). Sequences obtained from wt were only used for quality control. Publically available small RNA deep sequencing data obtained from wt seedlings (178 646 reads matching the genome; (10) were used for comparison with *ddm1* (Fig. 3A), to take advantage of their deeper coverage.

Densities (Fig. 3B, Table S1) were calculated by first considering each sequence probed by McrBC-PCR together with 300 bp on either side. Thus, densities were calculated over a 700-800 bp region in each case, using the following formula:

$$ND = \frac{\sum \left(\frac{NR_i}{NM_i}\right)}{TNR x \text{ Region Length}} x10^8$$

where NR is the number of reads corresponding to match Mi, NMi is the number of total matches for that sequence across the genome, TNR is the total number of matching reads in the library, Region length is in bp. Densities are expressed as the number of reads per unique match per kb per 10⁵ reads. This formula thus corrects for the fact that many siRNAs match multiple positions within the genome.

Frequency distribution of siRNA sizes (Fig. 3C) was calculated by first removing reads (approximately 25-28%) corresponding to known miRNA genes and tasiRNAs as well as reads smaller than 16 nt or larger than 28 nt.







А





























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С











Fig S1. Schematic representation of the different genetic crosses performed to investigate remethylation in the progeny of *ddm1* plants with restored DDM1 function. The *ddm1* and wt parents were from the Col accession. Reciprocal crosses were performed between *ddm1* and wt as well as between F1 progeny and wt. F2 plants of *DDM1/DDM1* and *ddm1/DDM1* genotype and obtained through backcrossing (BC1) as well as selfing of F1 parents were selected for DNA methylation analysis. F2 plants of *DDM1/DDM1* genotype were also propagated by selfing for another five generations for DNA methylation analysis. Purple and orange color lines indicate chromosomal segments inherited from *ddm1* and wt, respectively.

Fig. S2. McrBC-qPCR analysis of DNA methylation in a single progeny line over successive generations (BC1-S2 [F4] to BC1-S5 [F7]). Representation is as in Fig. 1A of the main text.

Fig S3. Segregation analysis of DNA methylation in *DDM1/DDM1* BC1-S3 [F5] and BC1-S7 [F9] lines. (**A**) Results obtained using 20 independent F5 lines and 11 sequences located outside the knob region of chromosome 4. (**B**) Results obtained using an additional 30 independent F9 lines and 13 sequences located within as well as outside the knob. Name and position of probed sequences are indicated at the top. DNA methylation levels were measured by MrcBC-qPCR. Black rectangles indicate, high, wt methylation, white rectangles indicate either absence of methylation or *ddm1*-induced hypomethylation. Sectored rectangles indicate levels of methylation that are intermediate between that of wt and *ddm1*, suggestive of heterozygosity. Observed values for segregation of methylation states are indicated below each graph, as well as values expected in the case of Mendelian segregation.

Fig S4. McrBC-qPCR analysis of DNA methylation in F1 progeny. (**A**) Representation as in Fig. 1A. Stars indicate sequences not analyzed in the F1 progeny. (**B**, **C**) Average DNA methylation level of 10 non-remethylatable (**B**) and 9 remethylatable (**C**) sequences in wt and *ddm1* seedlings, as well as in leaves, stems and inflorescences of F1 progeny. Averages between wt and *ddm1* are also indicated.

Fig S5. Results of bisulfite sequencing for (**A**) two remethylatable (At4g03900 and At4g03740) and (**B**) three non-remethylatable (At4g04165, At4g03770, and At4g03920) sequences located within the heterochromatic knob. Sequence size and position of cytosine sites are indicated at the top of each panel. The percentage of methylation at each cytosine in wt, *ddm1*, three independent *DDM1/DDM1* BC1-S3 [F5] lines, *rdr2.1*, and *nrpd1a/1b* is indicated by vertical bars (red, CG; blue, CHG; green, CHH). The number of clones sequenced is shown in each case.

Fig S6. Summary of bisulfite sequencing results obtained for (**A**) 3 remethylatable sequences (At4g03900, At4g03740 and At4g03650) and (**B**) 4 non-remethylatable sequences (At4g04165, At4g03770, At4g03920, and At4g03826). Red, CG; blue, CHG; green, CHH.

Fig. S7. Composition and wt DNA methylation of non-remethylatable and remethylatable sequences. (**A**) CG, CHG and CHH composition of 24 non-remethylatable (stippled bars) and 27 remethylatable (solid bars) sequences. (**B**) Percentage of methylation of CG, CHG and CHH sites in wt plants as measured by bisulfite sequencing of 4 non-remethylatable (stippled bars) and 3 remethylatable (solid bars) sequences in wt (for individual results, see fig. S5 and S6). (C) Percentage of methylation of CG, CHG and CHH sites in wt plants as measured at 22 non-remethylatable (stippled bars) and 18 remethylatable (solid bars) sequences by mining single-base resolution methylome data (*11*).

Fig. S8. Annotation of small RNA populations and expression analysis of genes involved in RNAidependent DNA methylation. (**A**) Annotation of 21-nt and 24-nt RNAs matching the Arabidopsis genome in wt and *ddm1*. (**B**) Annotation of 21-nt RNAs matching transposable elements in wt and *ddm1*. (**C**) Genome browser view of a representative ATHILA6 retrotransposon located on chromosome 3 (positions 13646944 to 13658552), with matching small RNAs (blue: 20-21 nt; green: 22-23 nt; red: 24-25 nt). Note that most 21-nt RNAs that accumulate in *ddm1* match the 3' subterminal part of the element, which includes the predicted precursor for miR854 (*12*).

Fig. S9. DNA methylation analysis in RNAi mutants. (**A**) McrBC-qPCR analysis. Representation as in Fig. 1A. Stars indicate sequences not analyzed in the different RNAi mutants. (**B**) Summary of McrBC-qPCR data.

Fig. S10. (**A**) Model of DNA methylation control over repeat elements in Arabidopsis. Percentage of methylation of individual cytosines is indicated by vertical bars of varying height (red: CG; blue: CHG; green: CHH). Sequences are shown as being potentially transcribed upon loss of DNA methylation. For simplicity, progressivity of remethylation over successive generations is not illustrated. This model is an oversimplification, as there is likely a continuum of situations (question marks over double arrows) between the two extremes represented here. (**B**) McrBC-qPCR analysis of "SoloLTR" (*13*) methylation in wt, *ddm1*, *met1-1*, *nrpd1a/1b*, and *rdr2*.

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							wt 21nt sRNA* (number	of wt 24nt sRNA* (number of	ddml 21nt sRNA (number	ddml 24nt sRNA (number of	Density of wt 24-nt sRNA (per	Density of ddml 24-nt sRNA (per
Name of primer pair	Chr.	Position	Forward Primer	Reverse Primer	Annotation	Sequence type	matching reads)	matching reads)	of matching reads)	matching reads)	kb per 10 ⁵ 24-nt RNA reads)	kb per 10 ⁵ 24-nt RNA reads)
LTRTa3	1	1413684914137047	TTTGCTCTCAAACTCTCAATTGAAGTTT	TAGGGTTCTTAGTTGATCTTGTATTGAGCTC	(ATCOPIA66)	NR	0	0	0	0	0	0
At2g01022	2	1230312487	CGAATGAATCCCTTACCCAAC	AGCGACATTCGGGAGGAT	AT2G01022 (ATGP1)	R	1	17	3	21	2,670772447	14,33404346
Actin2	3	64759496476127	GCCATCCCAAGCTGTTCTCTC	CCCTCGTAGATTGGCACAGT	AT3G18780	U	0	0	0	0	0	0
SUP	3	82427008242887	GGCCACATGAATGTTCACAG	CTTGGTGAGGATGGAGGAGA	AT3G23130	0	0	0	0	0	0	0
At3g32300	3	1325281413252997	ACGCCTCCATGTTGTTCCTA	TTCTGGAGTCGCGGAAGTAT	AT3G32300 (ATLANTYS2)	NR	0	0	0	0	0	0
At3g43681	3	1559493615595124	TCCGAATCTTCATCGTCTGA	CACGCCTCGCAATACTACAA	AT3G43681 (ATLANTYS2)	NR	0	1	0	0	0,474290559	0
AtSN1	3	1580562415805770	AACGTGCTGTTGGCCCAGT	CTGGAAGTTCAAGCCCAAAG	(RathE3_cons)	R	0	1	0	0	2,504966221	0
At4g03280(ORF)	4	14403221440508	CTCATCCCTTTCCCCTGCTAC	TGATTCATCTTCGTTGGCTTC	AT4G03280	U	U	0	0	0	0	10 0100000
AE4903650(ORF)	1	16214961621645	CGGGTTGTTCAGGAGTTTCAGT	TAGETETGECATETTTGETG	AT4G03650 (ATGP1)	R	1	19	1	21	2,43281/826	10,01040909
LB(65)	1	10335541033090	ATTAGAAGGGTGGCCGAACT	AGGAGETTCATCCCCAAATGA	AT4G03690 (HELITRONZ)	R	2	1	0	0	1,259235041	0
18(50)	4	1651320 1651487	accorda accordina a mac	GGCABCICCARITICICARG	1001-annocaced	P	0	8	0	0	13 4000961	0
10(45)	4	1654018 1654138	TTOTTAGATTTGCTCCCTCA	GCCTTTGA ACTTTGTGA A TGG	AT4003730 (ATENSEM2)	P	0	1	0	6	2 595423334	60 78731733
18(42,5)	4	1656372 1656565	ATCAGCGGCTTTCAGTT	TGACATCATTGTTGATCCTCAG	non-annotated	P	0	-	0	0	4 713000758	00,10152,155
LB(37.5)	4	1661412 1661566	TCATTGTGCCCACATATTCG	CGATGTTTTTCCGACGATTT	non-annotated	R	1	5	ő	1	12.39194165	9.674374112
LB(35)	4	1663903 1664062	TGCAGCAAACAAGACTAACGA	AGTAGGCTGTCCCTGGGTTT	(HELITRONYIC)	NR	-	2	-	-	4.924123322	0
LB(32,5)	4	16664161666551	GGCACGAGCTTTGTAAGAGG	GGGTCTTGTGGACTTTTGGA	AT4G03745 (ATENSPM2)	NR	0	1	0	0	0.508491102	0
LB(27,5)	4	16713821671533	AATTACGCTCGCTCATCTCG	CTCCGAGAGCCACGTAGAAG	AT4G03760 (ATLANTYS2)	NR	0	0	0	0	0	0
At4q03770(ORF)	4	16737291673971	CGATGAACGAAGAGTTCAGCC	GGCTTTGCCGCTTAAGTCA	AT4G03770 (ATLANTYS2)	NR	0	1	0	0	0.158526027	0
LB(25)	4	16738601674024	GAGGACCCGATCTCCTTCAT	CGAGAACACCCCTGATAACG	AT4G03770 (ATLANTYS2)	NR	0	1	0	0	0,174710621	0
LB(22,5)	4	16764281676568	GGTTGTAACCAGCGAATCGT	TGGAGGGTCTGCGTAGATTT	AT4G03770 (ATLANTYS2)	NR	0	6	1	0	4,37714638	0
LB(20)	4	16788371679004	GGCGCTTATCTCCTGTTCTG	ATTTTGGGAAATCGGGAAAC	AT4G03770 (ATLANTYS2)	NR	0	0	1	0	0	0
At4g03770(PRO)	4	16793701679513	GAGAATCTCACAAAGATTCGTTC	TGAATTGGGTGGTTGGTTTT	(ATLANTYS2)	NR	0	0	1	0	0	0
LB(15)	4	16838041683944	GCTCCAGGAGTTTTTCAGCA	GAAGCCTAGAGAGCGAGTCGT	AT4G03780 (ATHILA3)	м	0	1	0	3	2,525276758	7,275702075
A		16855141685735;	11 month 1 cm co co co co to m	maaa ammaa aaaaa aa aam	(300177.30)					40	1 (10205202	5 507555643
AE4903/90(LTR)	-	16946911694912	AATCTAAGTGCCACCGCAAT	IGGAATITGAGCCCAGACAT	(ATHILA2)	R	9	31	8	48	1,618305793	5,52/550041
ta22d08	4	16884371688644	AATCTGGGAGGAGGAGGAGGA	CATAGACGAACCGCCTTGTT	AT4G03790 (ATHILA2)	R	2	10	315	18	0,668129825	6,483779019
LB(10)	4	16889231689056	TCCCTCGCTGGAGGTATATG	AGTCCGCCAACTGATGATGT	AT4G03790 (ATHILA2)	R	5	12	274	5	4,405156431	2,261713407
LB(7,5)	4	16917111691852	GCAACTTGATGTGCTTTCCA	ACTGACTTCGTGGTGCTGAA	AT4G03790 (ATHILA2)	м	0	6	0	3	0,828849512	2,330516092
At4g03790(ORF)	4	16926321692733	ATCCGAATTGCACCATAAGC	GATGCTGATTGTCCTTCCAAA	AT4G03790 (ATHILA2)	R	2	8	2	0	0,837841792	0
LB(2,5)	4	16965291696673	TGTGAAGCCTGAGATCTCGTT	TTTGGGAGACATGGCATACA	AT4G03795 (ATHILA3)	R	0	4	0	1	5,210478347	0,653627068
LB(0)	4	16987901698964	TCCTAAATGCCTAAGTGTGCAA	TTCTCCCAAACCTCACATCTC	(ATHILA3)	U	0	B	2	5	1,718898046	2,642687217
AtenSAT1	4	17183751718813	GCTTTTCCAACGGTGAAACTTT	CGTGTTTGTAACGCCGAGTTC	(ATENSAT1)	R	1	35	0	3	4,881136864	1,711466356
AtenSAT2	4	17188391719323	CGTTTCTGCTTGTGACGTGTTC	CCTCTCGTCGTCGCCATTATTG	(ATENSATI)	R	0	30	0	5	3,68486575	2,361137667
AtenSAT3	4	17193341719448	AGAAAGTTTGTACGCCGCAAG	TGGCAAATGCGAGAAAATTG	(ATENSATI)	R	0	в	0	6	1,390251821	6,202044535
RB(0)	4	17423301742467	CGACGAGAGGCTGCATCTAA	CACAGAACAAGGAACAAACGAG	(ATHILA4A)	R	0	13	0	0	1,937984802	0
RB(2,5)	4	17440501745011	CIGCIGACCATGCAAACAAT	COCCERCISCOURS ACCERCIS	AT4G03800 (ATLANTISI)	NR D	0	±	0	0	2,455591065	0
RB(5)	4	1740922 1750010	COCTA COL ANTICOCCUTCAT	COOLINC CARCEARGANING	(20000)	R II	0	3	0	0	3,105150400	0
RB(10)	4	1752876 1753037	COCGA A ATCTO A A ATCOA A A	TAACCTTTCCCAACCACCA	(AIREFIDD) AT4003810 (ATCODIA95)	т	0	0	0	0	0	0
RB(12.5)	4	1754561 1754691	OGTGACTTGATCATGAAACCAT	TGAAACTTAGTCATCAGTCACCTCA	non-annotated	Î.	0	4	ő	0	2.239885891	ů.
BB(15)	4	1757308 1757437	TCTGGACCCAGTTCCCAATA	CCCAGCCAGACAAACCTAAG	non-annotated	R	1	16	0	1	21.07465438	10.00614277
RB(17,5)	4	17596681759865	TGTGCCCTTCGTGAATGTTA	TAACGGGGAACACCACCTAA	non-annotated	м	1	4	0	0	9.378694106	0
RB(20)	4	17623771762505	ACGGCAGGGAGATCCTCTAT	ATTCGGGGACTTTTGTTTCC	AT4G03813	I	0	1	0	0	2,566902199	0
RB(22,5)	4	17650401765190	ACCCAGGTGGTCGAGTGATA	CAAGCCGAGTACCACCATCT	AT4G03816 (ATHILA2)	R	0	3	0	0	0,725577688	0
RB(25)	4	17673851767517	GGCGGCTACAAATGTTGAAT	CGATCGGCTGCAATTAGAA	AT4G03816	NR	0	0	0	0	0	0
RB(27,5)	4	17697441769853	GGGTTTTGAGAAGCCCATTT	CGAACTTGGCAAAGCTTGAT	AT4G03816 (ATCOPIA28)	υ	0	0	0	0	0	0
RB(30)	4	17723131772471	CAGTGATCCCTGCTCTGTTG	CGCGCCATTTCTTCTCAG	AT4G03820	U	0	0	0	0	0	0
RB(32,5)	4	17748131774954	CGAACACACGGATATGTTGC	TGGTGATGTACTCGCTGTCAA	non-annotated	R	0	2	0	0	2,521868827	0
RB(35)	4	17771251777324	CACGATAGATCAATAGGATTGAGG	CACGATCGTATGAGTTAGCAACTTT	(ATREP10A)	R	3	30	1	4	5,799972189	1,232185431
RB(37,5)	4	17797841779915	GCTTAACGGGCCATATTTGA	CGAGTTTGCTTGTTTCACCA	non-annotated	υ	0	0	0	0	0	0
RB(40)	4	17822121782344	CAATCATTTGGAGTGCAACG	TTCCTAAGCTATGGCCGAGT	non-annotated	U	0	0	0	0	0	0
RB(42,5)	4	17844731784608	TGGATCTTCGAACACAATGC	GGATGCCTTTGCATGAATGT	AT4G03827	U	0	0	0	0	0	0
RB(45)	4	17864901786688	GCGGAACCAATTATAGATGAGG	CGTCAACAGCTCCAAATCAC	AT4G03825 (ATHILA2)	м	0	0	0	4	0	1,129922983
At4g03826(PRO)	4	17874861787683	ACAGATATTTCCGCGCTCA	ACCGCAACAGAGATCCTCAA	(ATHILA2)	R	7	11	1	22	1,527170913	2,782534867
RB(47,5)	4	17897831789958	CCCCAAGTCTTCGAAGTGAA	ACGAACCGTCACACTTTTCC	(TAT1_ATH)	NR	1	0	0	0	0	0
RB(50)	4	17923301792462	GCTGGAAGAAGGTCAAGCTG	CGACGCCTAAACTTCCTCTG	AT4G03830	NR	0	U	0	0	0	0
RB(54)	4	17966111796805	GTGGCCGACAATAAAGAAGG	CTCAGCCGATCCCTACTCAG	(ATGP2)	NR	3	в	1	3	3,428324846	1,421/9/635
RB(71)	4	18130241813155	AGAGGAGGGGGGATGCTAATC	TCACTCGCTCCATCAGTGTC	AT4G03870	NR	0	3	0	8	0,123724603	0,811834536
AE4g03900(PRO)	1	1838222.1838363	ACGITTGAGAGAGAAATCCGAGAAA	IGTIGICGIATATGCGICGI	(VANDAL21/ATENSPM5)	1	0	4	0	0	1,081245885	6 045676304
AE4g03900(ORF)	4	18398651840024	TATACIGATOGOTIC	AGCICGAGGAIGATTIGGIC	AT4G03900 (ATENSPMS)	R	0	8	29	,	1,3//3610//	0,8450/0304
AE4g03920(PRO)	4	18552521855370	TAATCGATGTCGGGGAAGCCT	CGAGTTTTGGAAAAGCCCATA	non-annotated	U NTD	0	0	0	0	0 512461507	0
At4(04040(PRO)	4	1928485 1938636	COTOCTTTTTCCCATACTCCA	COTOGETETACTOCOTACTTAC	non-annotated	M	0		0	3	2 488288683	29 13906024
At4g04140(ORF)	4	1986726 1986871	TTACATTGAAGGATCGGCTGT	ATTCAAGCAATGCAACAACG	AT4G04140 (VANDAL20)	T	0	- 0	ő	ő	0	
At4g04140(PRO)	4	19890721989241	CGGAATTAGTTAACAAGTCGGTGA	GAAACACAACCGAAACTGACAA	(VANDAL20)	NR	ő	ő	ő	ő	ő	ő
ta26b10	4	20091412009407	CTGAGGCTCATGAGGTCGAT	GGGACACCGTTTCAGCATAC	AT4G04165 (ATLANTYS2)	NR	-	1	-	-	0.539464434	-
At4q04170(PRO)	4	20132082013379	ACCTTTCTTCGTCTTCGGCC	TGGAGACATTACCTTGTTCGTG	AT4G04170 (ATENSPM2)	NR	-	-	-	-	0	-
At4g04380(ORF)	4	21417532141930	TGGTGTTTTGTGGCTGTCTC	AGCGCTTGAGTATGGAGCTG	AT4G04380 (ATCOPIA32B)	NR	0	-	0	0	0	0
At4g04390(PRO)	4	21426442142828	TCCCTTTCTCCGTTATTCTCCA	CGCCATCTACAAAACCCAGA	AT4G04390 (VANDAL9/VANDAL12)	NR	0	0	0	0	0	0
At4g04390(ORF)	4	21466972146868	CGCCTTTACCCGAAGTTCAT	CAAGGCAACCCAATGCTTCT	AT4G04390 (VANDAL11)	NR	0	1	0	0	2,423741635	0
At5g13440	5	43083034308423	ACAAGCCAATTTTTGCTGAGC	ACAACAGTCCGAGTGTCATGGT	AT5G13440	U	0	0	0	0	0	0
At5g30673	5	1141442711414621	CAGATATTTCCGCACCCG	CGCAACAGAGACCCTCAAGT	(ATHILA2)	R	1	29	5	70	1,176991585	12,44279111
At5g33257	5	1254795812548058	ACCAAGCCGAGTACAACCATAT	CATTGTGCTCGAGTGTCTGG	AT5G33257 (ATHILA2)	R	11	6	0	2	3,617160014	0,806762553
At5g35057	5	1333809213338196	TGCTAGATCGAGTGAGTGTCGT	CCGAGCCTAGAGAGCAGAAG	AT5G35057 (ATHILA2)	R	11	10	273	6	1,306598741	3,094985903
* From R. Rajagopalan	, H. Vau	cheret, J. Trejo, D. 1	P. Bartel, Genes Dev. 20, 3407	(2006).								

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Name of primer pair	Chr.	Position	wt	dd#1	line44 BC1-	line202 BC1-	line134 BC1-	line134 BC1-	line134 BC1-	line134 BC1-	F1 F1 (Çddml	(^Q wt F1 K (Tanma)	F1	F1 (Infloresc	F 2	F 3 F 4	75	5A11(F2)	6F11(F2) 5	5A11(F3) 6	6F11(F3)	186(F2)	187(F2) 1	.B6(F3) 1	187(93) 7	784(12)	704(#2)	7A4(F3) 7	C4(F3) 10	F5(F2) 10E6(F	2) 1028(92) 1018(F2)	10F5(F3) 1	OE6(F3) 1	LOB8(F3) 10	1118(173) 111	rpdia and the rd	r2 dc12d	cl3 met1	-1 ddmlr	ddm1dcl;
					\$3[\$5]	\$3[\$5]	52[74]	\$3[\$5]	54[F6]	\$5[\$7]	x ්wt) ්d	ini) (Deaves)	(scens)	ences)																							.puin				4013
LTRTe3	1	1413684914137047	95,27	3,83	96,16	93,28	94,40	91,35	82,12	86,59	50,22 54	,42 50,37	40,40	41,59	n/a n/a	n/a n/i	a n/a	n/a	n/a	n/a n/a	n/a n/a	n/a	n/a n/a	n/a	n/a n/a	n/a n/a	n/a n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a n/a	n/a n/a	n/a m/a	n/a 9	13,06 96,	84 93,	79 66,8	33 4,74	18,64
Actin2	3	64759496476127	11,86	16,30	10,83	2,25	3,87	7,75	11,49	12,35	11,07 9	.74 n/a	n/a	n/a	n/a	n/a n/i	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a ·	4,70 7,	82 6,0	0 2,6	4 n/a	n/a
SUP	3	82427008242887	13,18	12,70	3,87	16,35	n/a	18,15	n/a	n/a	n/a r	/a n/a	n/a	n/a	n/a	n/a n/i	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a 1	0,08 15,	65 3,0	2 3,2	5 n/a	n/a
At3g32300	3	1325281413252997	99,27	28,01	32,86	97,69	n/a	99,20	n/a	n/a	n/a r	/a n/a	n/a	n/a	n/a	n/a n/i	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/	a n/i	a n/ <i>i</i>	a n/a	n/a
AC3G43001	3	15805624 15805770	94 41	57 76	94 65	94 60	n/a n/a	88 15	n/a n/a	n/a n/a	n/a r	/a n/a /a n/a	n/a	n/a n/a	n/a n/a	n/a n/i n/a n/i	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a 2	n/a n/ 17 47 34	a n/i 46 n/i	59 C	а п/а 78 б.95	1/A 46.93
At4g03280(ORF)	4	14403221440508	3,17	3,91	21,24	4,14	6,47	13,55	14,07	25,27	n/a r	/a n/a	n/a	n/a	n/a	n/a n/a	n/a	9,56	7,57	7,63	3,13	4,09	0,54	5,68	15,16	4,68	4,31	0,65	12,27	6,14 4,62	2,49	10,19	9,82	1,40	4,71	13,64	n/a 8,	17 22,	04 18,2	27 n/a	n/a
At4g03650(ORF)	4	16214961621645	97,29	49,55	97,95	96,91	96,55	97,49	95,02	95,24	n/a r	/a n/a	n/a	n/a	n/a	n/a n/	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a 9	14,36 95,	32 96,	88 97,1	13 41,03	3 37,80
LB(65)	4	16335541633696	70,92	37,11	90,64	92,24	54,65	78,80	66,00	62,64	n/a r	/a n/a	n/a	n/a	n/a	n/a n/i	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/	a 80,	73 73,5	51 n/a	n/a
LB(50) LB(47.5)	4	16513201651487	27,60	35,25	26,79	23,69	33,75	30,30	33,46	32,88	n/a r 63.41 41	/a n/a 22 71 14	n/a 63.06	n/a 55.89	n/a 41.16 5	n/a n/i 6.58.66.i	n n/a	n/a 41.04	n/a 41 29	n/a 59 70	n/a 53.45	n/a 78 10	n/a 73.99	n/a 95.43	n/a 82.04	n/a 72 82	n/a 21.12	n/a 96.92	n/a 96.55	n/a n/a 6.55 0.15	n/a 65 37	n/a 72.26	n/a 4.64	n/a 1.76	n/a 79.76	n/a 88.03 9	n/a 53, 12.64 97	09 94	91 67,6 63 77 1	51 n/a 10 1.86	n/a 5 10
LB(45)	4	16540181654138	82,00	36,09	97,02	96,06	84,18	79,91	57,02	68,28	58,78 63	,89 n/a	n/a	n/a	36,30 4	8,60 68,	9 77,92	37,64	34,97	50,79	46,42	96,06	97,23	94,91	95,19	91,37	94,35	96,77	97,40	3,77 16,58	47,76	45,91	0,34	6,66	54,88	36,48 9	0,76 87,	49 90,	32 64,5	58 3,56	0,64
LB(42,5)	4	16563721656565	80,15	35,53	91,34	92,48	81,79	80,97	65,76	69,74	62,68 63	,35 n/a	n/a	n/a	62,18 8	1,75 87,	83 86,30	58,40	65,95	77,24	86,26	77,12	81,00	85,06	89,24	92,71	93,49	96,86	96,74	19,89 41,91	42,71	52,01	11,97	21,53	29,78	30,25 9	10,64 89,	57 83,	16 75,3	32 6,61	0,47
LB(37,5)	4	16614121661566	93,78	48,61	93,56	90,65	84,78	93,47	85,23	86,75	78,94 75	,57 93,50	94,57	83,62	61,96 8	5,60 89,	57 92,17	65,36	58,55	84,20	86,99	89,79	83,79	91,70	91,45	92,36	93,14	98,32	97,96	4,96 16,99	50,02	71,08	1,40	7,29	51,57	67,11 9	3,75 91,	12 92,	00 35,4	40 12,63	1 9,89
LB(32.5)	-	16664161666551	88 57	24 55	11 15	1 78	16 00	5 40	1 41	16 52	45 11 50	/a n/a 56 n/a	n/a	n/a n/a	6.26 1	n/a n/i 0.12 3.5	9 5.40	n/a 8.92	3,60	9.52	10.83	50.80	n/a 46.52	n/a 41.23	n/a 49.69	40.07	36 55	42 29	38.88	n/a n/a 14.75 33.21	38.65	30 42	n/a 19.61	28 55	51.86	50.51 9	n/a 52, 3.44 94	43 89	46 61 3	55 E/A 71 1.33	n/a 0.26
LB(27,5)	4	16713821671533	97,66	23,75	2,08	1,01	14,26	0,99	1,75	12,63	50,43 49	,61 56,41	59,94	38,72	21,23 2	5,49 5,9	4 2,08	37,73	4,73	35,87	15,10	39,41	52,23	30,08	48,91	53,16	49,07	49,47	42,74	4,31 76,35	30,98	1,43	58,53	62,58	14,38	8,87 4	7,30 96,	94 97,	75 18,1	15 17,53	3 3,26
At4g03770(ORF)	4	16737291673971	99,14	1,35	0,00	9,89	10,63	41,86	17,51	38,30	n/a r	/a n/a	n/a	n/a	n/a	n/a n/	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a 9	14,46 96,	37 99,	04 22,6	65 n/a	n/a
LB(25)	4	16738601674024	98,03	22,73	12,45	0,34	30,68	26,25	29,82	35,38	41,20 45	,04 52,32	56,54	42,35	n/a	n/a n/i	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a 9	14,11 94,	56 97,	52 16,5	51 17,00	J 6,91
LB(22)	4	16788371679004	97.02	20.16	7.34	9.38	0.99	4.86	0.92	2.77	51.07 48	,33 E/A .26 63.41	54.60	n/a 31.59	n/a n/a	n/a n/i n/a n/i	n/a n/a	5,02 n/a	25,24 n/a	15,39 n/a	29,93 n/a	n/a	n/a	n/a	53,64 n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	1/a	n/a	n/a	n/a 9	14,14 96, 14.10 94.	36 97.	22 36.8	50 10,39 87 n/a	n/a
At4g03770(PRO)	4	16793701679513	87,21	19,47	25,98	18,77	15,92	31,15	19,08	24,86	53,33 50	,05 n/a	n/a	n/a	n/a	n/a n/i	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a 9	3,37 95,	16 89,	94 19,1	11 n/a	n/a
LB(15)	4	16838041683944	62,02	42,85	64,89	63,90	33,68	48,38	39,27	43,18	n/a r	/a n/a	n/a	n/a	n/a	n/a n/i	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a 93,	78 88,	75 62,5	51 13,47	/ 9,65
At4g03790(LTR)	4	16855141685735;	91,30	67,64	96,22	97,65	92,07	92,62	89,41	82,30	80,15 81	,98 n/a	n/a	n/a	n/a	n/a n/i	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a 9	4,25 97,	39 91,	14 87,9	97 33,01	1 42,41
F=22408	4	1688437 1688644	98.16	20.83	97.96	91 99	96 37	98 23	97.19	97 54	68 82 73	55 21 44	72 49	64 91	76.05 9	1 96 90	18 96 37	87 42	64 69	96.97	86.96	74 76	85 43	87 33	92 97	83 19	85.98	89 91	91.81	6 62 77 8	66.90	66 65	57.66	78 44	63.90	67 20 9	1 06 95	83 97	57 70 9	an 20.94	4 10.85
LB(10)	4	16889231689056	94,14	32,08	84,50	90,30	85,09	93,40	83,72	84,45	61,56 62	,10 55,34	64,53	66,81	51,99 8	2,79 91,	9 94,56	45,34	58,64	82,10	83,49	60,98	74,46	70,07	81,68	58,24	50,99	77,29	74,21	10,66 42,41	59,38	21,16	21,54	40,66	41,15	39,82	n/a 95,	04 98,	07 16,9	01 23,00	0 0,55
LB(7,5)	4	16917111691852	66,53	51,29	69,54	70,78	66,04	65,69	53,70	59,19	n/a r	/a n/a	n/a	n/a	n/a	n/a n/i	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a 8	18,36 95,	32 89,	43 20,1	16 51,11	1 14,06
At4g03790(ORF)	4	16926321692733	55,54	18,84	65,25	74,47	45,22	51,48	48,79	44,44	n/a r	/a n/a	n/a	n/a	n/a	n/a n/	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a 76,	18 58,	82 76,6	65 n/a	n/a
LB(2,5)	-	1698790 1698964	28 67	43 43	34 92	45 33	20.83	14 99	41 65	28 25	n/a r	/a n/a /a n/a	n/a	n/a n/a	n/a n/a	n/a n/i n/a n/i	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a 53	69 35	51 52 3	30 n/a 39 n/a	n/a n/a
AtenSAT1	4	17183751718813	81,67	31,94	96,79	96,67	84,56	85,57	76,63	79,70	n/a r	/a n/a	n/a	n/a	93,04 5	6,85 95,	7 90,96	93,91	92,17	96,48	97,21	97,38	96,10	96,09	94,80	99,08	98,03	98,71	98,73	7,85 76,25	68,39	67,57	33,14	68,03	60,87	57,06 9	1,53 90,	64 85,	83 54,7	77 0,21	0,05
AtenSAT2	4	17188391719323	77,66	45,38	94,90	92,35	72,58	77,75	68,30	74,72	n/a r	/a n/a	n/a	n/a	65,21 8	4,28 88,	07 87,95	74,32	56,10	83,61	84,95	92,52	88,45	98,21	93,15	95,90	95,50	98,19	97,74	8,79 62,53	49,27	48,95	59,67	53,01	43,34	48,22 9	1,18 91,	55 84,	10 67,9	2 17,35	i 19,77
Aten5AT3	4	17193341719448	96,70	25,36	97,61	94,74	97,00	97,95	92,76	96,76	61,53 61	,57 72,42	75,95	68,85	64,00 7	7,05 82,	88 94,52	66,09	61,92	76,78	77,32	83,17	94,95	91,17	98,17	86,08	94,76	90,91	96,13	19,07 61,44	26,79	58,76	33,57	53,35	18,77	57,37 9	4,28 94,	47 95,	98 71,5	59 0,80	1,20
RB(0) RB(2.5)	4	17423301742467	86,37	26,57	23 04	75,58	6 96	23 57	31 93	62,95 25 42	57 23 45	,49 n/a 98 n/a	n/a n/a	n/a n/a	79,64 3	2,01 93,: n/a n/i	5 92,58 n/a	79,79 n/a	79,49	91,01 n/a	93,01 n/a	67,86 n/a	66,66 n/a	77,65 n/a	78,00 n/a	86,45 n/a	85,23 n/a	93,15 n/a	96,88 : n/a	13,12 93,83 n/a n/a	: 65,25	29,13 n/e	87,50	87,50 n/a	69,54 n/a	33,10 9 n/a 9	14,37 95, 13.98 96	27 93,0 43 91	01 99,0 17 78,8	21 11,94 81 n/a	, 2,62 n/a
RB(5)	4	17473751747513	88,89	12,08	86,47	86,15	50,03	55,42	47,54	48,59	56,17 56	,31 n/a	n/a	n/a	n/a	n/a n/a	n/a	5,07	20,44	46,02	40,29	77,08	63,70	83,37	78,67	71,17	68,99	83,44	88,34	7,78 13,5	23,32	5,32	3,53	1,38	26,71	13,38 9	4,12 97,	38 94,	88 56,3	34 n/a	n/a
RB(7,5)	4	17498371750010	27,36	26,06	35,57	31,93	34,55	39,27	42,62	34,89	n/a r	/a n/a	n/a	n/a	n/a	n/a n/i	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a 21,	54 38,	15 25,2	26 n/a	n/a
RB(10)	4	17528761753037	50,53	16,63	74,55	78,66	20,36	38,31	39,19	28,34	n/a r	/a n/a	n/a	n/a	n/a	n/a n/i	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a 7	1,16 82,	87 68,	57 57,8	85 n/a	n/a
RB(12,5) PB(15)	-	17573081757437	21 28	45 48	94 47	95.03	26 19	35,38 79.95	20,34	37,95	n/a r	/a n/a /a n/a	n/a	n/a n/a	n/a n/a	n/a n/i n/a n/i	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a	n/a n/a	n/a n/a	n/a n/a	n/a d	n/a 50, 16.92 16	98 53	24 54,0 56 11.0	21 11/a 26 11/a	n/a n/a
RB(17,5)	4	17596681759865	49,23	27,35	74,99	73,79	44,83	46,38	35,59	44,82	n/a r	/a n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a 57,	00 46,	74 31,3	36 n/a	n/a
RB(20)	4	17623771762505	87,01	16,79	0,00	2,35	53,42	79,13	55,32	58,20	58,38 52	,72 n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a 9	14,13 94,	58 90,	67 74,6	54 n/a	n/a
RB(22,5)	4	17650401765190	90,45	16,91	89,77	83,31	89,41	91,03	82,52	85,76	60,05 46	,73 n/a	n/a	n/a	31,82 5	5,77 71,	12 87,66	32,91	30,72	57,39	54,15	67,56	71,94	74,23	77,15	80,10	85,39	86,51	89,08	57,81 51,10	7,05	19,97	47,10	43,48	9,83	23,52 9	14,15 96,	35 93,	01 47,8	33 3,38	1,97
RB(25) RB(27.5)	4	17697441769853	13.73	18,80	15.42	26.31	9.07	8.96	24.54	14.80	n/a r	/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/i n/a n/i	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a 3	12.22 20.	75 7.2	11 1,5	4 n/a 0 n/a	n/a n/a
RB(30)	4	17723131772471	5,61	19,82	1,38	1,71	9,20	8,35	13,62	19,03	n/a r	/a n/a	n/a	n/a	n/a	n/a n/	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a 0,	00 1,7	9 0,0	0 n/a	n/a
RB(32,5)	4	17748131774954	95,58	74,43	98,09	97,87	94,56	94,45	82,37	84,61	n/a r	/a n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a 9	2,24 90,	10 97,	31 48,8	87 n/a	n/a
RB(35)	4	17771251777324	38,23	43,57	42,55	30,24	48,49	52,29	55,69	45,94	n/a r	/a n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a 4,	14 0,0	63,2	21 n/a	n/a
RB(40)	4	17822121782344	20,10	29,30	25,88	8,70	21,81	8,24	0,95	27,41	n/a r	/a n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a 3	13,37 5,	89 3,1	2 0,0	0 n/a	n/a
RB(42,5)	4	17844731784608	25,74	35,37	5,37	2,73	33,01	17,73	6,90	18,80	n/a r	/a n/a	n/a	n/a	n/a	n/a n/i	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a 9,	83 5,6	9 10,6	52 n/a	n/a
RB(45)	4	17864901786688	65,57	44,19	70,63	63,05	51,26	54,73	68,12	49,79	n/a r	/a n/a	n/a	n/a	n/a	n/a n/	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a 88,	19 56,	16 49,9	97 n/a	n/a
At4g03826(PRO)	4	1789783 1789958	92,43	62,71 20.25	95,42	97,67	91,78	93,80	89,42	85,14	76,73 71	,96 n/a 47 60.16	n/a 40.16	n/a 29.47	96,27 3	8,42 96,	74 92,44 5 12.92	94,68	97,86	98,22	98,63	98,25	98,39	99,76	99,84 57.70	98,82	99,03	98,67	20.00	4,39 82,44	164,72	71,83	63,11	82,90	01,48	75,68 9	12,25 96,	96 92,0	58 87,0 20 29.0	36 23,13 10 16 91	1 2 21
RB(50)	4	17923301792462	96,34	20,58	21,26	7,76	9,78	0,27	3,41	13,33	46,66 51	,14 46,59	49,26	48,37	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a 9	3,90 85,	81 95,	92 36,4	43 2,05	3,67
RB(54)	4	17966111796805	94,87	40,11	16,68	19,08	9,75	29,82	25,02	24,57	44,67 45	,98 n/a	n/a	n/a	2,80	9,37 0,3	2 10,08	2,49	3,12	3,83	14,91	52,56	38,29	39,23	42,92	55,09	59,72	58,38	47,51	2,38 12,45	4,78	12,13	1,42	30,26	7,90	15,32 9	3,69 n/	a 91,	42 68,1	12 2,69	11,29
RB(71)	4	18130241813155	86,50	51,66	15,80	11,26	54,41	55,55	36,63	25,11	60,63 31	,12 n/a	n/a	n/a	n/a	n/a n/	a n/a	39,07	17,02	31,59	16,42	58,18	68,56	52,18	63,29	65,57	68,61	66,31	68,56	13,88 58,51	67,80	4,84	30,98	57,95	74,00	20,17 9	12,48 n/	a 87,	64 74,1	12 11,75	, 1,78
At4g03900(PRO) At4g03900(ORF)	4	1839865 1840024	95,95	1,40	52,33 95.45	46,38	95,19	98,53	87,91 86 33	94,92	51,41 51	,20 49,03 83 p/a	49,95	37,85 n/a	n/a 96.18 9	n/a n/a 8 01 95 1	n n/a 17 94 09	n/a 96.16	n/a 96.20	n/a 97.92	n/a 98 10	n/a 97.98	n/a 98.44	n/a 97.11	n/a 96.53	n/a 98.32	n/a 97.58	n/a 98 10	n/a 97.88	n/a n/a 13.29 39.31	n/a 71.97	n/a 72 92	n/a 64 39	n/a 37.78	n/a 69.54	n/a 9 77.12 9	13,69 87,	39 92,0	85 0,0 72 921	1 n/a 13 0.22	n/a / 18.45
At4g03920(PRO)	4	18552521855370	26,22	21,23	45,85	50,86	21,29	27,86	11,00	20,80	n/a r	/a n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a 50,	71 29,	99 29,3	37 n/a	n/a
At4g03920(ORF)	4	18606901860968	99,52	34,33	3,13	11,57	34,46	38,21	12,50	54,44	n/a r	/a n/a	n/a	n/a	n/a	n/a n/i	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a 9	4,51 98,	43 98,	88 98,1	14 8,24	. 44,20
At4g04040(PRO)	4	19384851938636	94,79	83,25	91,82	87,63	91,62	90,94	86,59	87,46	n/a r	/a n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a 95,	03 94,	25 43,9	97 67,18	J 66,35
Ategosieu(URF) Ategosieu(URF)	4	19890721986871	94,46 68.20	15.38	4.50	34,88	10.92	18.19	05,73	19.67	n/a r n/a v	/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/i n/a n/i	n n/a n/e	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a 9 n/a 4	13,59 95, 15.70 90	42 72	53 69,2 74 65 0	24 n/a 19 1.64	n/a i 1.43							
ta26b10	4	20091412009407	99,11	8,60	9,11	2,69	10,98	9,95	0,38	19,36	40,37 36	,55 45,33	54,05	45,76	11,19	7,66 11,	1 9,95	18,97	3,41	13,85	1,47	50,39	31,80	47,96	28,95	48,55	48,32	50,78	40,77	7,36 17,93	5,10	18,21	23,34	6,05	3,07	21,54 9	14,50 n/	a 98,:	99 30,2	25 18,41	1 5,35
At4g04170(PRO)	4	20132082013379	95,36	3,44	6,28	4,08	2,76	10,46	3,50	12,80	48,65 56	,72 n/a	n/a	n/a	11,49	8,57 6,4	5 10,46	10,28	12,69	2,71	14,43	47,28	45,34	40,26	44,91	45,85	44,13	55,40	42,76	8,93 54,43	3,54	7,37	32,40	38,22	2,11	12,32 9	4,14 95,	13 96,	77 56,1	17 9,16	2,94
At4g04380(ORF)	4	21417532141930	77,07	18,48	0,15	3,41	10,71	9,86	24,99	20,36	42,19 44	,16 39,14	40,38	41,71	n/a	n/a n/	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a 8	14,42 95,	09 82,	33 77,9	94 n/a	n/a
Ategu4390(PRO)	4	21426442142828 2146697 2146849	92,87 96.46	16,29	2 38	6,47	6,70	5,11	9,02	21,08	49,78 53	,/5 45,64	52 98	47,42	n/a n/a	n/a n/i	n/a n/e	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a 9 n/a	na,30 97, n/a az	47 92,- 70 96	∎7 69.4 87 69.6	•3 5,26 53 15 12	7,27							
FKA-TR	4	1303839413038584	92,61	58,93	97,14	95,15	n/a	91,59	n/a	n/a	n/a r	/a n/a	n/a	n/a	n/a	n/a n/i	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a 9	2,14 97.	68 92.	03,5 91 21.1	12 1,45	1,33
At5g13440	5	43083034308423	9,09	7,30	0,76	3,43	4,09	6,14	5,45	13,43	5,34 9	89 0,28	0,16	0,25	4,55	3,47 4,3	2 7,36	10,18	5,25	5,95	14,36	0,22	2,04	4,81	3,80	3,73	7,16	1,75	8,10	1,34 5,98	8,55	0,96	1,40	0,00	4,27	3,39	1,97 3,	74 9,6	8 0,4	1 1,49	1,61
At5g30673	5	1141442711414621	98,89	74,83	97,44	97,85	n/a	96,44	n/a	n/a	86,18 84	,83 84,75	89,00	94,28	n/a	n/a n/	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/	a n/	s n/s	12,86	, 6,30
At5g33257	5	1254795812548058	89,34	27,49	87,99	88,08	n/a	88,57	n/a	n/a	57,65 51	,07 55,65	44,57	47,91	n/a	n/a n/i	n n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/	a n/i	a n/a	s 5,49	31,77
AC3333031	~	T333005V. 13330130	FW,00	21,29	ra, 29	**,95	447.68	20,00	44.7 (8)	aa/ 86	21,23 03	, 53,93	JA, /3	14,90	447.6	11/m II/i	n/a	**/#	447.68	447 M	any ek	447 M	**/ m	**/ m	44.7 (%	44.7 (%	44.7 (%	447 M	447 M	**/ # E/#	n/a	44/18	447.08	447 M	447 M	aa/ m	/ m II/	a 11/1	 n/s 	 n/a 	4/8

Teixeira et al, Table S2B																																									
Name of primer pair C	ır.	Position	wt	ddm1	line44 BC1 \$3[95]	line202 BC1- \$3[\$5]	line134 BC1- S2[F4]	line134 BC1 : S3[F5]	linel34 BC1 54[F6]	line134 BC1- S5[F7]	F1 F1 (Gddml x 같 :	(Çwt ddml) (Le	Fl Fl aves) (Stems)	F1 (Inflores)	F 2	F 3	74	75	5A11(F2) 0	6911(92) 1	5A11(F3) (SP11(P3)	186(F2) 1	B7(F2) 1B	5(93) 18	7(\$3) 784	(\$2) 704(F2) 784(F	1) 7C4(F3)	10F5(F2)	1026(F2)	1088(F2)	1088(F2) 10	075(F3) 108	86(93) 10	B8(F3) 10H8(F3) nrpdla nrpdlb	rdr2	del2del3	met1-1	ddmlr ddmldcl2 dr2 dcl3
LTRTm3	1 :	1413684914137047	0,83	1,27	0,59	0,85	0,40	0,08	0,72	1,23	1,51 7	,65 1	,95 2,95	2,04	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a i	s/a	n/a n	a n/	n n/a	n/a	n/a	n/a	n/a	n/a	n/a i	n/a	n/a n/	0,02	0,78	0,73	2,27	1,66 6,12
Actin2	3	64759496476127	0,53	0,09	0,55	0,61	0,45	0,05	1,28	n/a 5,17	3,32 1	,83 3	,36 1,96 i/a n/a	0,57 n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a i	1/a :	n/a n n/a n	(a n/	a n/a a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a i	n/a n/a	n/a n/ n/a n/	ь п/а ь 1,06	0,30	0,94	0,73	4,08 15,25 n/a n/a
SUP	3	82427008242887	1,84	6,28	7,66	2,91	n/a	5,62	n/a	n/a	n/a r	n/a i	/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a i	1/a :	n/a n	(a n/	a n/a	n/a	n/a	n/a	n/a	n/a	n/a i	n/a	n/a n/	1 7,64	2,51	7,64	9,93	n/a n/a
At3g43681	3 3	1559493615595124	0,18	3,53	1,05	0,25	n/a n/a	0,05	n/a n/a	n/a n/a	n/a r	n/a 1 n/a 1	i/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a i	1/a : 1/a :	n/a n n/a n	(a n/	a n/a a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a i	n/a n/a	n/a n/ n/a n/	s n/a s n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a n/a n/a
AtSN1	a :	1580562415805770	0,24	1,60	0,02	0,45	n/a	2,15	n/a	n/a	n/a r	n/a s	/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a 1	1/a :	n/a n	a n/	a n/a	n/a	n/a	n/a	n/a	n/a	n/a i	n/a	n/a n/	s 5,92	3,81	n/a	5,11	9,19 0,00
At4g03280(ORF)	4	16214961621645	0.07	3.53	0.18	0.10	0.09	0.08	0.21	0.05	n/a r	n/a 1 n/a 1	/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	1,33 D/A	2,04 D/A	3,1/ n/a	1,41 D/8	2,24 D/8	n/a 1	, 27 - 1 1/a - 1	7,48 D, D/S D	сч 5,. (в п/	.1 3,03 8 D/A	1,20 n/a	1,01 n/a	0,99 D/A	0,0/ n/a	3,/4 D/8	4,52 0 n/a 1	n/a	n/a n/	а п/а в 0.05	4,55	0.10	0.11	1.91 22.26
LB(65)	4	16335541633696	5,91	12,21	1,00	2,47	10,77	3,24	3,81	0,58	n/a r	s/a s	/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a i	1/a	n/a n	(a n/	a n/a	n/a	n/a	n/a	n/a	n/a	n/a i	n/a	n/a n/	s n/a	n/a	5,38	1,09	n/a n/a
LB(50) LB(47.5)	4	16488501648985 16513201651487	0,50	1,91	0,51	0,53	0,10	2,51	5,90	2,21	n/a r	n/a 1 30 0	/a n/a	n/a 0.26	n/a 1 70	n/a 2.18	n/a 0.75	n/a 1.09	n/a 0.29	n/a 3.11	n/a 0.02	n/a 4 14	n/a 1.10	n/a 1 0.76 0	1/a : 63 (n/a n 0.65 0	(a n/ 94 0.1	а п/а ю 0.30	n/a 0.21	n/a 13 24	n/a 7.85	n/a 0.68	n/a	n/a 1 3.50 2	n/a 2 49	n/a n/ 0.50 0.8	ь п/а в 0.08	6,15	11,42	1,59	n/a n/a 7.05 3.18
LB(45)	4	16540181654138	0,22	2,53	0,06	0,37	0,03	0,08	5,62	0,21	6,54 0	,62 3	/a n/a	n/a	7,72	5,06	2,00	0,27	9,07	6,36	2,40	7,71	0,53	0,17 0	,43 0	0,05 0,	13 0,1	4 0,21	0,12	2,47	11,47	9,52	6,51	1,47 3	1,66	3,09 1,5	6 0,37	0,12	0,50	3,58	2,76 8,88
LB(42,5)	4	16563721656565	0,71	2,02	0,40	0,11	0,93	0,42	0,25	0,70	0,37 2	12 0	/a n/a	n/a	1,68	0,24	0,35	0,06	1,57	2,86	0,47	0,01	5,81	0,56 1	,39 3	3,86 0,	40 2,0	9 0,15	0,05	2,77	1,91	4,17	5,88	4,74 1	1,54	0,00 2,0	5 0,17	0,63	0,32	4,97	8,53 24,59
LB(35)	4	16639031664062	1,37	0,74	7,18	0,67	1,50	2,61	1,22	5,27	n/a r	n/a 3	/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a 1	1/a :	n/a n	(a n/	в п/а	n/a	n/a	n/a	n/a	n/a	n/a i	n/a	n/a n/	ь п/а	2,80	6,32	1,00	n/a n/a
LB(32,5)	4	16664161666551	0,24	0,82	3,18	2,46	1,08	0,16	2,99	1,50	2,20 0	,67 :	/a n/a	n/a	1,21	4,36	6,74	1,16	1,89	0,52	1,77	6,95	1,08	1,85 0	,25 2	2,39 5,	59 5,:	.8 1,01	8,19	3,12	8,40	4,65	9,20	0,39 1	1,05	1,18 0,1	3 0,03	0,65	0,70	0,80	0,99 4,04
At4g03770(ORF)	4	16737291673971	0,11	7,86	8,87	2,39	3,67	5,93	5,00	15,39	.,24 0 n/a r	n,e/ 0 n/a s	, u,18 i/a n/a	u,55 n/a	1,54 5/a	2,00 n/a	3,84 5/8	0,14 n/a	0,05 n/a	2,97 n/a	5,89 5/8	n/a	0,01 n/a	n/a 1	,uo 2 1/a :	a,, 1 1, n/a n	чо 2,3 (а п/	., u,88 в п/а	1,79 n/a	1,12 n/a	2,45 n/a	n/a	a,49 n/a	n/a :	n/a	a,oi 4,5 n/a n/	L 0,16 L 0,09	0,31	0,41	9,26	n/a n/a
LB(25)	4	16738601674024	0,05	1,39	8,61	0,45	1,21	0,13	0,28	0,34	2,54 6	,36 1	,94 0,15	0,08	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a i	1/a	n/a n	a n/	a n/a	n/a	n/a	n/a	n/a	n/a	n/a i	n/a	n/a n/	0,14	0,49	0,55	0,41	3,88 4,05
LB(22,5) LB(20)	4	16768371676568	1,13	0,06	0,08	1,37	2,59	1,82	0,49	0,15	0,44 0	.91 0	.82 8.11	n/a 5.17	n/a n/a	n/a n/a	n/a n/a	n/a n/a	4,19 D/A	2,20 D/A	8,69 D/A	5,15 D/a	5,71 D/A	0,91 3 n/a 1	,61 1 1/a	1,58 6, n/a n	42 8,4 (a n/	4 3,96 5 D/A	5,71 n/a	3,45 D/A	10,04 D/8	3,51 D/A	3,43 n/a	2,94 1 n/a 1	1,23 D/a	0,48 2,8 n/a n/	9 0,15	0,37	0,07	1,78	2,17 0,32 D/a D/a
At4g03770(PRO)	4	16793701679513	0,07	10,03	2,82	0,56	5,62	1,44	0,26	2,55	1,78 1	,36	/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a i	1/a	n/a n	(a n/	a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/	0,00	0,45	0,60	1,08	n/a n/a
LB(15)	4	16838041683944	1,21	0,66	0,49	0,25	0,27	0,32	1,49	1,81	n/a r	n/a s	i/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a i	1/a	n/a n	a n/	a n/a	n/a	n/a	n/a	n/a	n/a	n/a i	n/a	n/a n/	s n/a	0,12	0,52	0,31	8,10 7,42
At4g03790(LTR)	4	16946911694912	0,63	0,64	0,32	0,00	0,37	0,21	0,66	2,24	0,07 0	,39 3	i/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a i	1/a	n/a n	a n/	a n/a	n/a	n/a	n/a	n/a	n/a	n/a i	n/a	n/a n/	a 0,07	0,22	0,05	0,63	4,25 5,15
ta22d08	4	16884371688644	0,01	0,13	0,53	0,06	0,19	0,06	0,09	0,06	2,11 0	,03 0	,61 1,58	5,88	0,67	0,65	0,16	0,10	1,19	0,16	0,18	1,12	0,96	0,43 3	,20 0	0,14 0,	31 0,:	5 0,21	0,06	0,64	1,63	0,16	1,47	8,04 2	2,49	0,71 0,1	9 1,14	0,29	0,02	2,69	1,07 11,54
LB(10) LB(7.5)	4	16917111691852	0,11	0,48	1,09	0,22	0,11	0,18	0,07	2,16	1,29 1 n/a r	.,13 4 1/a 3	,19 1,09 L/a D/a	0,14 n/a	2,37 n/a	0,14 n/a	0,63 D/A	0,60 n/a	2,46 n/a	2,29 D/A	0,22 n/a	0,05 n/a	1,53 D/A	0,12 3 n/a 3	,17 e 1/a :	5,96 0, n/a n	87 2,0 (a n/	14 0,94 в D/а	0,09	4,28 D/A	9,12 n/a	4,97 D/A	5,79 D/A	0,00 0 n/a 3	1,00 n/a	0,00 5,2 n/a n/	2 n/a a 0.14	0,08	0,10	0,61	1,30 6,22 3.88 10.56
At4g03790(ORF)	4	16926321692733	0,62	0,50	0,60	0,18	0,65	0,45	0,87	4,01	n/a r	n/a s	/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a i	1/a	n/a n	a n/	a n/a	n/a	n/a	n/a	n/a	n/a	n/a i	n/a	n/a n/	s n/a	1,04	0,86	0,38	n/a n/a
LB(2,5) LB(0)	4	16965291696673	6,30	0,45	0,57	1,04	0,22	0,67	3,98	0,87	n/a r	n/a n	i/a n/a	n/a	n/a	n/a n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a n/a	n/a n	1/a :	n/a n	(a n/	a n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/	n/a	0,67	1,56	1,45	n/a n/a
AtenSAT1	4	17183751718813	0,18	1,64	0,34	0,07	0,01	0,07	1,21	0,69	n/a r	n/a i	i/a n/a	n/a	0,47	0,10	0,62	0,11	0,24	0,71	0,05	0,15	0,06	0,14 0	,26 0	0,37 0,	47 0,:	2 0,08	0,00	0,76	1,05	7,07	0,79	0,00 1	3,87	1,46 5,3	5 0,09	0,38	0,75	3,84	5,01 5,01
AtenSAT2	4	17188391719323	0,04	2,05	0,06	0,76	0,30	0,52	1,18	2,08	n/a r	n/a s	/a n/a	n/a	5,05	0,49	0,18	0,11	2,07	1,03	0,27	0,70	0,68	1,09 0	,04 0	0,51 0,	03 0,0	8 0,11	0,03	0,61	4,03	2,66	0,50	0,40 1	1,38	1,67 2,0	3 0,44	0,10	0,37	2,43	0,23 2,51
RB(0)	4	17423301742467	0,35	0,83	0,44	1,45	0,34	0,52	0,17	0,47	0,18 0	,23 3	/a n/a	n/a	0,74	0,69	0,46	0,34	0,24	1,24	0,24	1,13	1,12	0,04 0	,79 0	0,69 0,	61 0,:	1 0,28	0,34	0,64	3,94	4,40	1,55	0,12 0	1,37	0,15 1,1	1 0,01	0,34	0,18	0,16	7,64 1,50
RB(2,5)	4	17448501745011	0,80	0,77	5,03	4,39	0,33	0,66	0,18	0,50	1,64 0	,82 :	/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a 1	s/a	n/a n	a n/	a n/a	n/a	n/a	n/a	n/a	n/a	n/a i	n/a	n/a n/	0,19	0,05	0,09	0,72	n/a n/a
RB(5) RB(7,5)	4	17498371750010	5,58	2,20	2,01	0,42	1,25	1,13	5,96	4,48	2,85 0 n/a r	1,18 1 n/a 1	i/a n/a i/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	0,47 n/a	0,78 n/a	6,60 n/a	3,22 n/a	0,80 n/a	0,03 0 n/a 1	,01 0 1/a :	0,98 0, n/a n	99 1,5 (a n/	i2 0,85 в п/а	0,23 n/a	6,84 n/a	9,72 n/a	5,43 n/a	0,00 n/a	0,00 0 n/a 1	1,00 n/a	1,11 0,6 n/a n/	3 0,06 в п/а	1,74	0,38	1,77	n/a n/a n/a n/a
RB(10)	4	17528761753037	2,47	1,85	4,56	1,73	2,62	1,33	0,27	7,62	n/a r	n/a s	/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a i	s/a	n/a n	a n/	a n/a	n/a	n/a	n/a	n/a	n/a	n/a i	n/a	n/a n/	2,38	0,42	0,75	0,81	n/a n/a
RB(12,5) PB(15)	4	17545611754691 17573081757437	0,27	1,00	0,50	1,78	1,80	2,69	2,99	0,59	n/a r	1/a 1	/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a i	1/a :	n/a n	(a n/	а п/а в п/а	n/a	n/a	n/a n/a	n/a n/a	n/a n/a	n/a i	n/a n/a	n/a n/	ь п/а 1.85	3,45	0,78	2,59	n/a n/a
RB(17,5)	4	17596681759865	0,86	0,71	0,52	1,72	1,34	0,51	2,57	2,49	n/a r	n/a i	/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a i	1/8	n/a n	(a n/	a n/a	n/a	n/a	n/a	n/a	n/a	n/a i	n/a	n/a n/	a n/a	0,94	1,50	1,79	n/a n/a
RB(20)	4	17623771762505	0,42	0,71	17,74	2,20	1,55	0,40	0,09	2,39	1,50 2	,23 :	/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a 1	1/A :	n/a n	а п/	a n/a	n/a	n/a	n/a	n/a	n/a	n/a 1	n/a	n/a n/	0,15	0,84	0,28	2,16	n/a n/a
RB(25)	4	17673851767517	0,62	1,97	11,03	2,33	2,42	2,35	1,79	5,87	0,36 0	,28 :	i/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a 1	1/a :	n/a n	(a n/	a n/a	n/a	n/a	n/a	n/a	n/a	n/a 1	n/a	n/a n/	0,37	1,01	2,48	4,74	n/a n/a
RB(27,5)	4	17697441769853	0,71	0,07	3,98	0,31	1,95	0,30	1,58	1,03	n/a r	n/a s	/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n	s/a :	n/a n	a n/	a n/a	n/a	n/a	n/a	n/a	n/a	n/a i	n/a	n/a n/	a 7,29	3,82	2,16	4,91	n/a n/a
RB(32,5)	-	17748131774954	0,11	0,46	0,16	0,02	0,05	0,22	0,00	0,06	n/a r	n/a 1 n/a 1	i/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a i	1/a : 1/a :	n/a n n/a n	(a n/	a n/a a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a i	n/a n/a	n/a n/ n/a n/	ь п/а ь 0,09	0,09	0,02	2,33	n/a n/a n/a n/a
RB(35)	4	17771251777324	4,25	3,93	4,97	1,93	1,76	1,52	1,21	0,28	n/a r	s/a s	/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a i	s/a :	n/a n	a n/	a n/a	n/a	n/a	n/a	n/a	n/a	n/a i	n/a	n/a n/	s n/a	3,33	10,82	1,18	n/a n/a
RB(37,5) RB(40)	4	17822121782344	8,74	4,14 2,57	4,94	1,32 2,38	1,23	2,71	10,52	4,57	n/a	n/a 1 n/a 1	i/a n/a i/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a n/a	1/a :	n/a n n/a n	a n/ (a n/	s n/a s n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/ n/a n/	s n/a s 5,74	7,83	3,48	9,72	n/a n/a n/a n/a
RB(42,5)	4	17844731784608	1,77	2,03	1,97	0,67	0,53	4,10	9,82	2,13	n/a r	n/a s	/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a i	1/a	n/a n	(a n/	a n/a	n/a	n/a	n/a	n/a	n/a	n/a i	n/a	n/a n/	n/a	16,85	17,01	10,40	n/a n/a
RB(45) At4q03826(PRO)	4	17864901786688 17874861787683	0,55	0,46	1,63	2,56	6,15	2,16	1,85	0,29	n/a r 0.11 n	n/a :	i/a n/a i/a n/a	n/a n/a	n/a 0.50	n/a 0.30	n/a 0.35	n/a 1.45	n/a 0.46	n/a 0.53	n/a 0.44	n/a 0.15	n/a n/d	n/a n/d	1/a : .17 (n/a n 0.20 0	(a n/ 03 n/	a n/a	n/a	n/a 1.05	n/a 0.52	n/a 1.93	n/a 2.21	n/a 1	n/a	n/a n/ 5.78 0.5	n/a 7 0,19	0,51	2,07	1,55	n/a n/a 9.96 3.37
RB(47,5)	4	17897831789958	0,06	1,02	21,22	2,21	1,86	3,13	1,57	0,06	0,82 7	,87 6	,21 2,87	2,50	3,60	2,31	5,93	3,13	7,10	0,10	2,32	2,30	2,05	2,69 3	,13 3	3,26 2,	68 18,	39 6,25	1,10	25,61	9,48	4,98	4,16	7,35 1	6,30 3	1,45 15,	74 0,22	0,08	0,02	5,91	1,77 1,69
RB(50) RB(54)	4	17923301792462 17966111796805	0,15	1,48	3,39	6,56	0,38	1,11	4,16	0,03	1,01 0	,11 0	,94 0,14	1,16	n/a 3.85	n/a 2.37	n/a 4 5.6	n/a 1 18	n/a 4 37	n/a 1 11	n/a 4 58	n/a 0.16	n/a 1.72	n/a 1 5.60 8	1/a : 65 /	n/a n 6.05 0	(a n/ 78 2.4	a n/a 5 1.01	n/a 0.36	n/a 15.69	n/a 8 14	n/a 11 79	n/a 8.60	n/a 1 2.98 1	n/a 1.37	n/a n/ 5.41 0.8	0,05	0,69	0,10	1,63	5,59 7,13
RB(71)	4	18130241813155	3,21	5,06	2,72	1,53	0,88	4,90	3,89	5,27	0,37 33	2,76	i/a n/a	n/a	n/a	n/a	n/a	n/a	1,49	4,07	5,36	4,91	3,28	1,04 2	,11 1	3,00 1,	56 0,5	2 0,18	0,51	3,57	9,26	0,16	9,75	1,01 1	1,24	1,66 1,1	7 0,08	n/a	0,21	3,42	8,96 5,90
At4g03900(PRO)	4	18382221838363	0,70	4,11	0,72	4,17	0,22	1,25	0,00	0,01	1,22 3	,90 4	,97 6,15	10,04	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a 1	1/a :	n/a n	(a n/	a n/a	n/a	n/a	n/a	n/a	n/a	n/a 1	n/a	n/a n/	0,17	4,14	1,35	1,06	n/a n/a
At4g03920(PRO)	4	18552521855370	3,42	0,15	0,19	0,51	3,08	1,29	4,01	1,42	n/a 1	1/a 1	./a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a 1	1/a :	n/a n	(a n/	a n/a	n/a	n/a	n/a	n/a	n/a	n/a 1	n/a	n/a n/	- 0,01 s n/a	0,67	1,90	2,54	n/a n/a
At4g03920(ORF)	4	18606901860968	0,10	2,63	7,64	4,01	5,19	0,49	13,45	14,75	n/a r	n/a :	/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a i	1/a :	n/a n	a n/	a n/a	n/a	n/a	n/a	n/a	n/a	n/a :	n/a	n/a n/	0,19	0,11	0,12	0,36	21,91 6,81
Ategueueu(PHO) Ategueueu(PHO)	4	19384851938636 19867261986871	0,02	3,50	0,54	9,13	5,11	0,13	1,78	0,62	n/a r	n/a 1 n/a 1	i/a n/a i/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	1/a : 1/a :	n/a n n/a n	a n/ (a n/	a n/a a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a i	n/a n/a	n/a n/ n/a n/	s n/a s 0,11	0,80	0,01	2,64	z,uz 0,54 n/a n/a
At4g04140(PRO)	4	19890721989241	1,01	1,98	2,98	8,45	0,40	1,67	1,21	1,62	n/a r	n/a i	/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a i	1/a	n/a n	(a n/	a n/a	n/a	n/a	n/a	n/a	n/a	n/a i	n/a	n/a n/	0,40	0,73	3,61	1,28	7,98 5,18
ta26b10 At4g04170(PRO)	4	20091412009407 20132082013379	0,05	0,55	13,17	1,15	4,02	1,37	2,80	2,04	2,31 8	.29 3	,08 7,54	3,97 D/A	2.16	2,39	1,34	1,37	6,95	13,21	4,57	0,20	5,02	1,22 1 2.14 1	,11 4	4,03 1, 6.76 0.	31 1,5 56 0.3	4 0,10	0,27	0,92	9,63	7,21	0,80	4,88 0	1,92	1,43 1,3 2.00 2.5	3 0,07 8 0.06	n/a 0.08	0,01	2,19	0,36 0,52 2.89 6.15
At4g04380(ORF)	4	21417532141930	1,54	0,56	1,17	4,04	1,65	0,36	19,05	0,47	0,18 2	,42 2	,42 0,57	1,28	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a i	1/a	n/a n	(a n/	s n/a	n/a	n/a	n/a	n/a	n/a	n/a i	n/a	n/a n/	1,09	0,26	1,40	2,79	n/a n/a
At4g04390(PRO)	4	21426442142828 2146697 2146868	0,12	7,65	4,53	6,71	5,40	1,97	0,14	0,99	3,59 0	,27 1	,18 0,00	1,38	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n	1/a :	n/a n	(a n/	a n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a	n/a	n/a n/	a 0,01	0,35	0,53	5,34	10,80 11,57
FNA-TR	4 3	1303839413038584	0,55	2,18	0,17	1,97	n/a	0,61	n/a	n/a	n/a r	n/a 1	/a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a i	1/a	n/a n	a n/	a n/a	n/a	n/a	n/a	n/a	n/a	n/a i	n/a	n/a n/	. 0,08	0,73	0,97	3,56	1,14 13,49
At5g13440	5	43083034308423	1,06	0,82	1,55	1,06	2,30	3,03	1,61	0,12	3,30 2	,40 1	,77 1,53	0,27	2,18	1,67	1,46	4,16																			1,45	0,47	0,33	0,33	1,12 4,68
At5g33257	5	1254795812548058	0,14	3,36	1,19	0,31	n/a n/a	0,47	n/a n/a	n/a n/a	3,14 0	, os 0 , 32 0	,89 1,00 ,59 3,48	0,91	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	1/a : 1/a :	n/a n n/a n	a n/ a n/	s n/a s n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a i	n/a n/a	n/a n/ n/a n/	s n/a s n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a
At5g35057	5 :	1333809213338196	0,01	0,05	0,42	0,17	n/a	0,50	n/a	n/a	0,26 0	,60 0	,69 1,23	3,69	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a i	s/a	n/a n	a n/	a n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/	a n/a	n/a	n/a	n/a	n/a n/a

Name of primer pair Bs-ara-At4g03650(ORF) Bs-ara-At4g03760(ORF) Bs-ara-LB(47,5) Bs-ara-At4g03900(ORF) Bs-ara-ta26b10

Sense

AGTAAAGATGGTAGAGITAAAGAIL GGGAGTAAGAGAAATGTTAAGTTTTTT ATGYTGGATTTATTATTGAGGTTTTGA AGTAAAGATGGTAGAGTTAAAGAAGTAG
 Bs-ara-LB(47,5)
 TATGATGGAATTATATTGAAATTYAGGA

 Bs-ara-At4g03900(ORF)
 GTTGGGGTATGYAGATTGATATATATG

 Bs-ara-At4g03920(ORF)
 GTTGGTGTTGTTGATATATTGATATATG

 Comparison
 GTTGTGTGTGTGATTATATTGATATGAATAGGTA
 GATGAAAAATGAAAAAGTTGAATAGGTA

Antisense	Product Size (bp)	Sequence type
ACAACTCATCAATCCTTAACAA	199	R
ACTTTAAAAACAAAAACACTTATTTTCA	237	NR
TCACACTTTTCCCAAAAAAAATCT	262	R
CRACAAACRTTTTTCTTCTATAATATAA	200	R
CCTTTACTTCCAAATAACATAAATAACA	254	NR
TTCCCAACCAATATTATTATCTRAAAA	260	NR
АААААААААААААААААААААААССТС	210	NR

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	Chr.	Position and size	Primer sequences
	1	23363737-23363954	5' CATTGCCTCCTGACTATTGGA 3'
INFDIA	I	218 bp	5' TCCTTCTTGATGAGCCTCTGA 3'
AG04	2	11547777-11547977	5' TTTCTGTGGTGCTTGAGGAA 3' ;
AG04	2	201 bp	5' AGTTTTTGGACCGGTTAGGC 3'
A+2a26060	2	15149917-15150067	5' TGAAGTCGTGAGACAGCGTTG 3' ;
A12930000	2	150 bp	5' GGGCTTCTCCATTGTTGGTC 3'
	2	16723780-16723989	5' TGATGGTTTCAGCACCATGT 3'
	2	210 bp	5' GCTTCAGCCTTATGCGACTC 3'
	3	771620-771849	5' CTGCAAAATCAAACTCGGAAG 3' ;
DOLZ	3	230 bp	5' GTTGGATGCAGGGTCAAATC 3'
	3	15766880-15767064	5' GCAAAACCATCTGTCAGCAG 3'
DOLS	5	185 bp	5' AAGGCACTGCTTTTGCTTGT 3'
	4	6783466-6783656	5' GAAGCAGGCCTCGTCTAATG 3'
	4	191 bp	5' GCAGTTGAGATCACCCCAAG 3'
At/a20130	1	14352280-14352408	5' GGCGTTTTCTGATAGCGAAAA 3' ;
Al4929130	4	128 bp	5' ATGGATCAGGCATTGGAGCT 3'
At5a12440	Б	4308303-4308423	5' ACAAGCCAATTTTTGCTGAGC 3' ;
Alby13440	5	120 bp	5' ACAACAGTCCGAGTGTCATGGT 3'
	Б	9872531-9872826	5' TGCTTTCTCTTTCTCTCTCTTTTC 3' ;
SUIDLIK	5	296 bp	5' AAACCGGATAAGTATGGATGTCA 3'

Table S1. List of primer pairs used for McrBC-qPCR analysis, sequence annotation and summary of small RNA data. Note that for each of the three primer pairs corresponding to the satellite repeat *ATENSAT1*, (AtenSAT1-3), only one out of 22 matching positions is indicated.

Table S2. Raw McrBC-qPCR data. (**A**) Average percentage (a minimum of two measurements) of molecules lost through McrBC digestion. (**B**) Standard deviation.

Table S3. List of primer pairs used for sequencing of bisulfite-treated DNA.

Table S4. Additional primer pairs used for RT-PCR and McrBC-qPCR analysis.

Supplemental References

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