Supplementary materials for

Benchmarking intrinsic promoters and terminators for plant synthetic biology research

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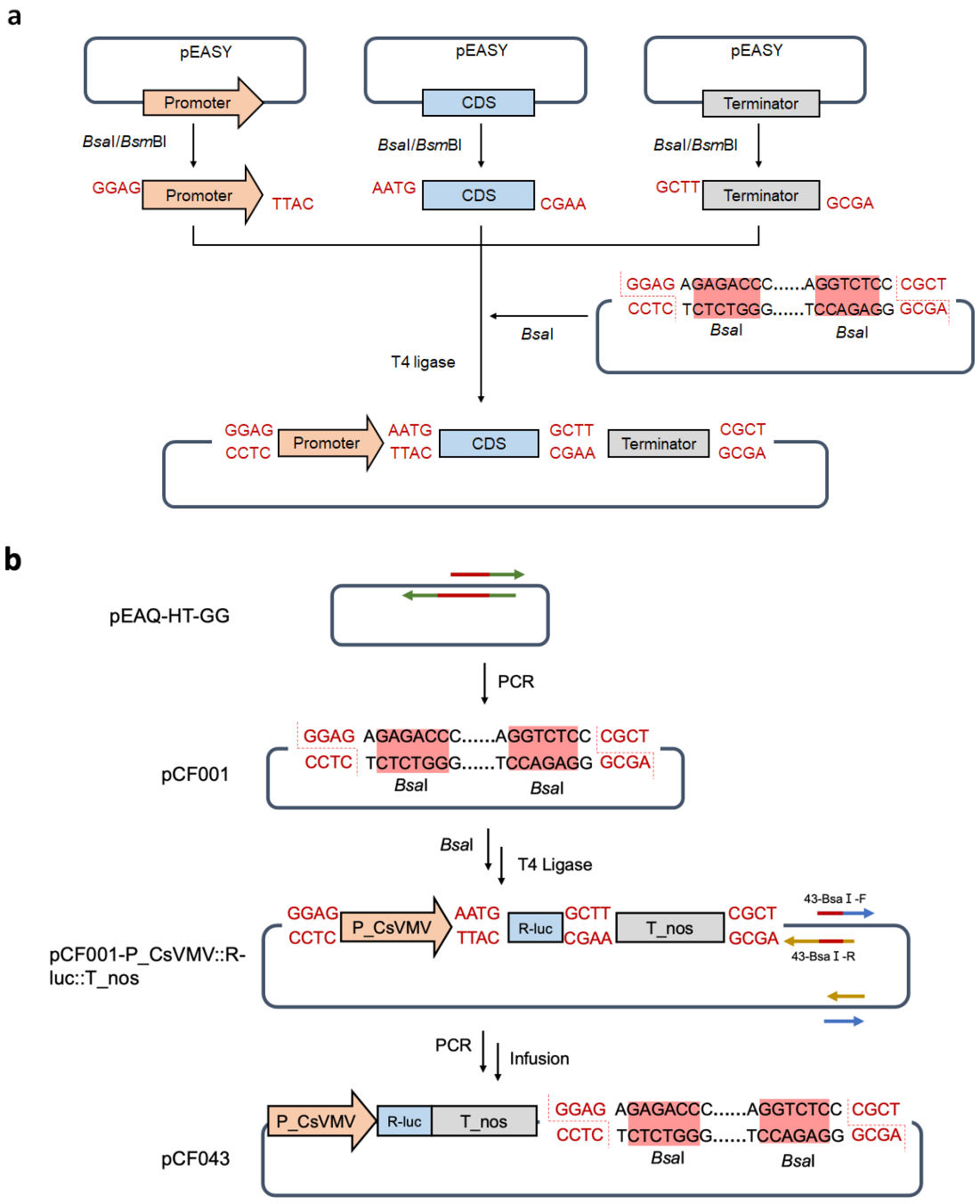

FIGURE S1. Type IIS assembly strategy for rapid plasmid construction. (a) Schematic diagram of plasmid construction. Standard genetic parts were inserted into the pEASY vector (TRANSGEN) with a standard restriction site. After digestion with *Bsa*I/*Bsm*BI, the genetic part segments with standardized 4-bp sticky ends could be sequentially linked by T4 ligase. The recognition sites of the Type II restriction enzymes *Bsa*I/*Bsm*BI were designed on the outside of both ends of the target fragment, so that the fragments recovered after digestion did not have the recognition site for digestion.

(b) GG3-*Bsa*I-F/GG3-*Bsa*I-R was used to PCR-amplify the pEAQ-HT-GG plasmid, adding the standard *Bsa*I restriction sites with GGAG and CGCT 4-bp overhangs to pEAQ-HT-GG to obtain the basic vector pCF001. For dual-luciferase assays, the contrasting reporter gene REN was expressed under the P_CsVMV promoter and the T_nos terminator, and this cassette was constructed according to the method in (a). Two pairs of primers were used to PCR-amplify the pCF001-P_CsVMV::REN-luc::T_nos plasmid to append the standard *Bsa*I restriction sites and obtain the vector pCF043 for dual-luciferase plasmid construction. The primers used for plasmid construction are listed in Supplementary Table 1.

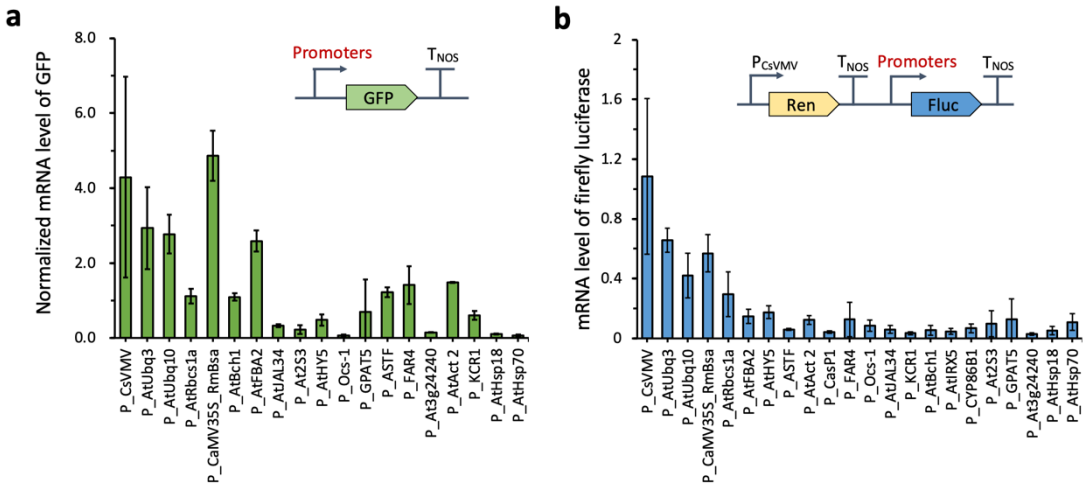

FIGURE S2. mRNA levels of reporter genes driven by different promoters. (a) normalized mRNA levels of GFP driven by different promoters. The internal reference used for qPCR was the actin gene. (b) normalized mRNA levels of firefly luciferase driven by different promoters. The internal reference used for qPCR was the *Renilla* luciferase gene in the plasmid. The mRNA expression levels were detected by real-time quantitative reverse transcription PCR. Data are presented as the mean ± standard error of three independent replicates.

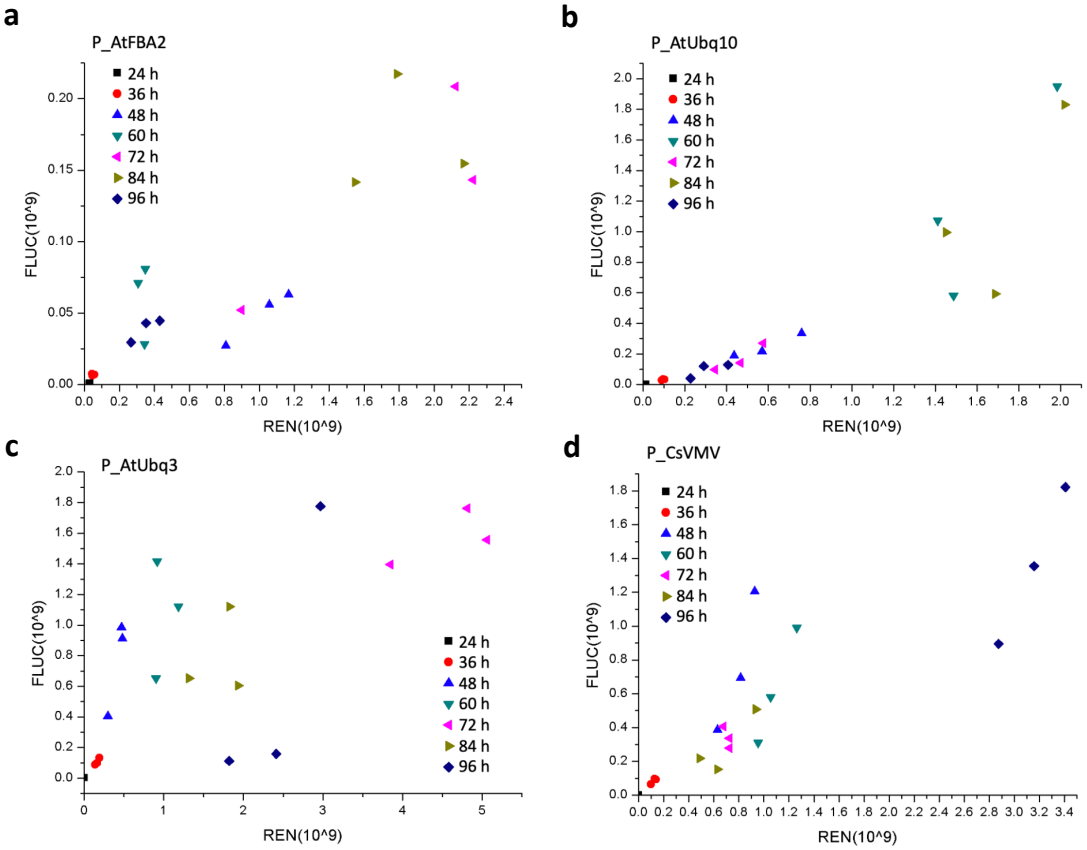

FIGURE S3. Dual-luciferase activity measurements with four representative promoters at different sampling times. Dual-luciferase activities with P_CsVMV::R-luc::T_nos and P_AtFBA2::F-luc::T_nos (a), P_AtUbq10::F-luc::T_nos (b), P_AtUbq3::F-luc::T_nos (c), and P_CsVMV::F-luc::T_nos (d).

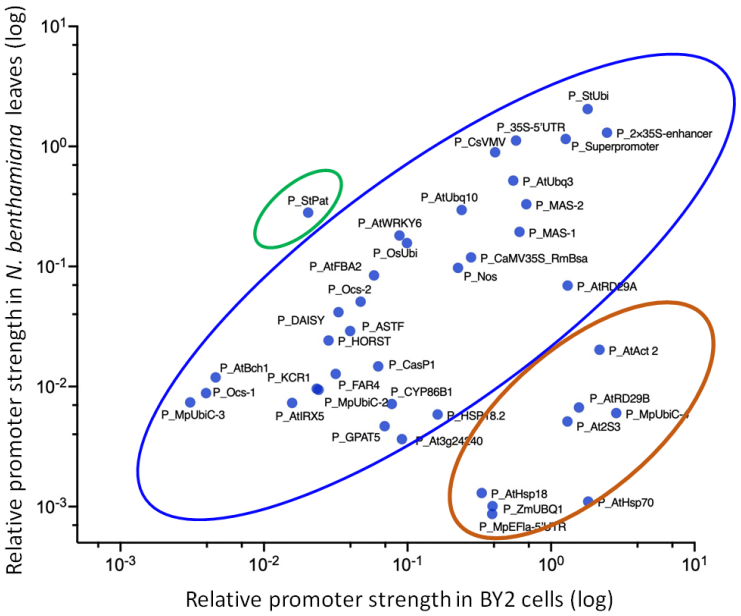

FIGURE S4. Comparison of relative transient expression levels of individual promoters in *N.benthamiana* leaves and BY2 cells. The relative promoter strengths (R-luc/F-luc activities) were monitored on a log scale. The scatter plots correspond to the relative strengths of the promoters. The plots located in the blue circle represent that the luminescence intensity is consistent within *N. benthamiana* and BY2 cells. The plots in the brown circle indicate represent that performance of promoters tested in BY2 cells are better than tested in *N.benthamiana*. The promoter P_StPat in the green circle shows a higher expression level in *N. benthamiana* than in BY2 cells.

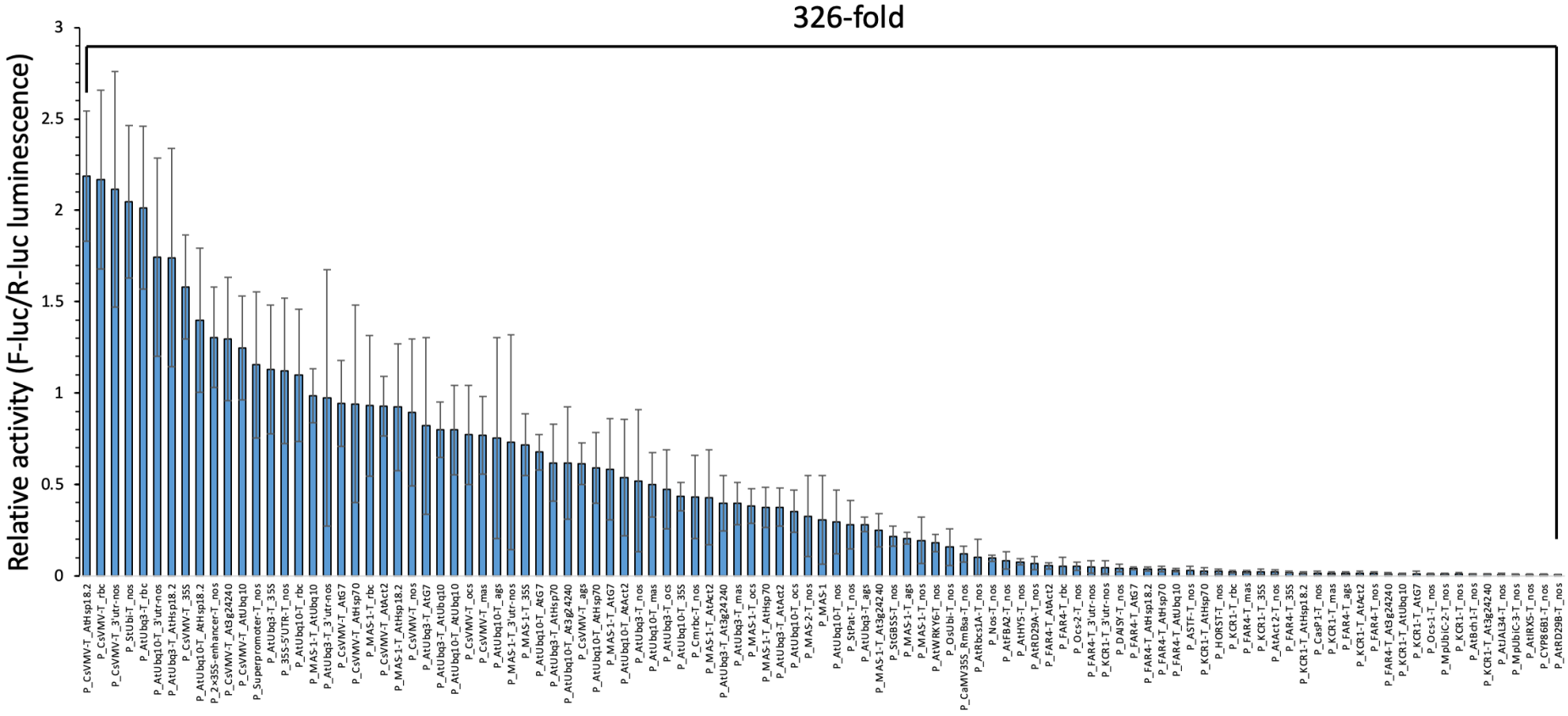

FIGURE S5. Expression cassette strength library obtained by integration of terminator elements. Expression cassette strength is presented as the ratio of firefly luciferase to *Renilla* luciferase luminescence intensity in *N. benthamiana*. These data are also shown in Figure 3 and Figure 5. Here,

we integrated different regulatory elements (promoters and terminators) to obtain more precise control of gene expression than that obtained by promoters alone.

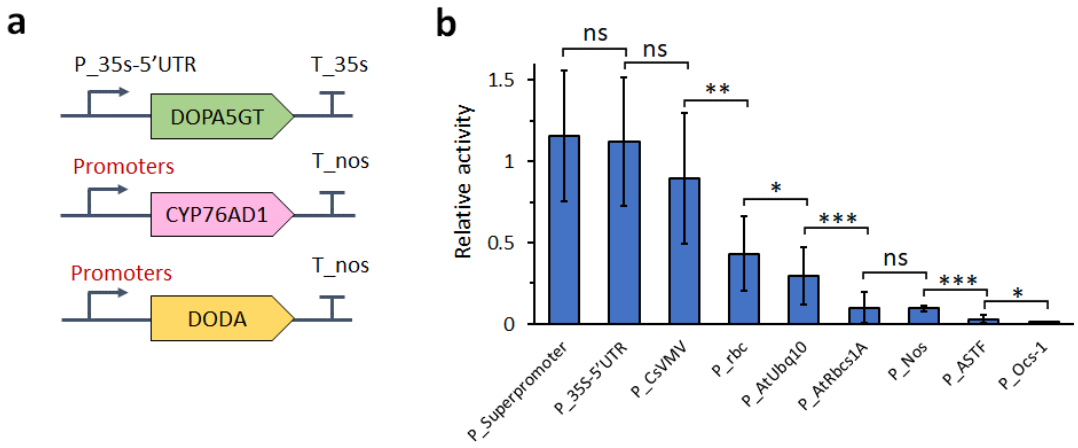

FIGURE S6. Different strengths of promoters used in betalain synthesis. (a) Schematic diagram of constructs used for betalain synthesis. DODA: DOPA 4,5-dioxygenase; DOPA5GT: cyclo-DOPA-5-O-glucosyltransferase. (b) Different strengths of promoters selected for use in betalain synthesis. The data are the same as the strengths shown in Figure 6.

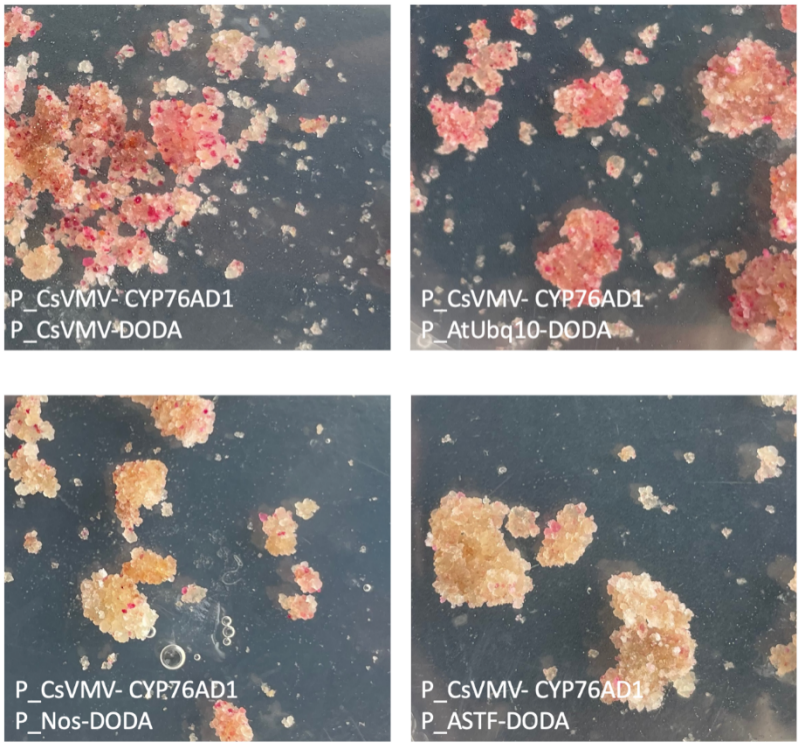

FIGURE S7. BY2-cells transformed with betalain synthesis genes. The cell-color phenotypes of BY2 cells co-infiltrated with *Agrobacterium* harboring plasmids for the expression of DOPA5GT, CYP76AD1, and DODA. DOPA5GT was controlled by the combination of P_35S-5′UTR and T_nos. CYP76AD1 and DODA were under the control of various promoters and T_nos.

Supplementary Table 1. Detailed information on the promoters used in this study

Element	Species	Length	Reference
P_CaMV35S_RmBsa	virus	315 bp	Peyret, H., et al., (2013). Plant Mol Biol 83:51-58.
	GGAAACCTCCTCGGATTCCATTGCCCAGCTATCTGTCACTTTATTGAGAAGATAGTG GAAAAGGAAGGTGGCTCCTACAAATGCCATCATTGCGATAAAGGAAAGGCCATCGT TGAAGATGCCTCTGCCGACAGTGGTCCCAAAGATGGACCCCCACCCACGAGGAGCA TCGTGGAAAAAGAAGACGTTCCAACCACGTCTTCAAAGCAAGTGGATTGATGTGAT ATCTCCACTGACGTAAGGGATGACGCACAATCCCACTATCCTTCGCAAGACCCTTCC TCTATATAAGGAAGTTCATTTCATTTGGAGAGG		
P_CsVMV	virus	520 bp	
	CCAGAAGGTAATTATCCAAGATGTAGCATCAAGAATCCAATGTTTACGGGAAAAAC TATGGAAGTATTATGTGAGCTCAGCAAGAAGCAGATCAATATGCGGCACATATGCA ACCTATGTTCAAAAATGAAGAATGTACAGATACAAGATCCTATACTGCCAGAATAC GAAGAAGAATACGTAGAAATTGAAAAAGAAGAACCAGGCGAAGAAAAGAATCTTG AAGACGTAAGCACTGACGACAACAATGAAAAGAAGAAGATAAGGTCGGTGATTGT GAAAGAGACATAGAGGACACATGTAAGGTGGAAAATGTAAGGGCGGAAAGTAACC TTATCACAAAGGAATCTTATCCCCCACTACTTATCCTTTTATATTTTTCCGTGTCATT TTTGCCCTTGAGTTTTCCTATATAAGGAACCAAGTTCGGCATTTGTGAAAACAAGAA AAAATTTGGTGTAAGCTATTTTCTTTGAAGTACTGAGGATACAACTTCAGAGAAATT TGTAAGTTTGT		
P_2×35S-enhancer	virus	884 bp	Chung, S.M., et al., (2005). Trends Plant Sci 10:357-361.
	GTGGAGCACGACACACTTGTCTACTCCAAAAATATCAAAGATACAGTCTCAGAAGA CCAAAGGGCAATTGAGACTTTTCAACAAAGGGTAATATCCGGAAACCTCCTCGGAT TCCATTGCCCAGCTATCTGTCACTTTATTGTGAAGATAGTGGAAAAGGAAGGTGGCT CCTACAAATGCCATCATTGCGATAAAGGAAAGGCCATCGTTGAAGATGCCTCTGCC GACAGTGGTCCCAAAGATGGACCCCCACCCACGAGGAGCATCGTGGAAAAAGAAG ACGTTCCAACCACGTCTTCAAAGCAAGTGGATTGATGTGATAACATGGTGGAGCAC GACACACTTGTCTACTCCAAAAATATCAAAGATACAGTCTCAGAAGACCAAAGGGC AATTGAGACTTTTCAACAAAGGGTAATATCCGGAAACCTCCTCGGATTCCATTGCCC AGCTATCTGTCACTTTATTGTGAAGATAGTGGAAAAGGAAGGTGGCTCCTACAAAT GCCATCATTGCGATAAAGGAAAGGCCATCGTTGAAGATGCCTCTGCCGACAGTGGT CCCAAAGATGGACCCCCACCCACGAGGAGCATCGTGGAAAAAGAAGACGTTCCAA CCACGTCTTCAAAGCAAGTGGATTGATGTGATATCTCCACTGACGTAAGGGATGAC GCACAATCCCACTATCCTTCGCAAGACCCTTCCTCTATATAAGGAAGTTCATTTCAT TTGGAGAGGACGTCGAGAGTTCTCAACACAACATATACAAAACAAACGAATCTCAA GCAATCAAGCATTCTACTTCTATTGCAGCAATTTAAATCATTTCTTTTAAAGCAAAA GCAATTTTCTGAAAATTTTCACCATTTACGAACGATAG		
P_35S-5′UTR	virus	830 bp	Peyret, H., et al., (2013). Plant Mol Biol 83:51-58.
	GGAAACCTCCTCGGATTCCATTGCCCAGCTATCTGTCACTTTATTGAGAAGATAGTG GAAAAGGAAGGTGGCTCCTACAAATGCCATCATTGCGATAAAGGAAAGGCCATCGT TGAAGATGCCTCTGCCGACAGTGGTCCCAAAGATGGACCCCCACCCACGAGGAGCA TCGTGGAAAAAGAAGACGTTCCAACCACGTCTTCAAAGCAAGTGGATTGATGTGAT		

	ATCTCCACTGACGTAAGGGATGACGCACAATCCCACTATCCTTCGCAAGACCCTTCC TCTATATAAGGAAGTTCATTTCATTTGGAGAGGTATTAAAATCTTAATAGGTTTTGA TAAAAGCGAACGTGGGGAAACCCGAACCAAACCTTCTTCTAAACTCTCTCTCATCTC TCTTAAAGCAAACTTCTCTCTTGTCTTTCTTGCGTGAGCGATCTTCAACGTTGTCAGA TCGTGCTTCGGCACCAGTACAACGTTTTCTTTCACTGAAGCGAAATCAAAGATCTCT TTGTGGACACGTAGTGCGGCGCCATTAAATAACGTGTACTTGTCCTATTCTTGTCGG TGTGGTCTTGGGAAAAGAAAGCTTGCTGGAGGCTGCTGTTCAGCCCCATACATTACT TGTTACGATTCTGCTGACTTTCGGCGGGTGCAATATCTCTACTTCTGCTTGACGAGG TATTGTTGCCTGTACTTCTTTCTTCTTCTTCTTGCTGATTGGTTCTATAAGAAATCTAG TATTTTCTTTGAAACAGAGTTTTCCCGTGGTTTTCGAACTTGGAGAAAGATTGTTAA GCTTCTGTATATTCTGCCCAAATTCGCG		
P_MAS-1	*Agrobacterium*	385 bp	Langridge, W.H., et al., (1989). Proc Natl Acad Sci USA 86:3219-3223.
	TTTTCAAATCAGTGCGCAAGACGTGACGTAAGTATCCGAGTCAGTTTTTATTTTTCT ACTAATTTGGTCGTTTATTTCGGCGTGTAGGACATGGCAACCGGGCCTGAATTTCGC GGGTATTCTGTTTCTATTCCAACTTTTTCTTGATCCGCAGCCATTAACGACTTTTGAA TAGATACGCTGACACGCCAAGCCTCGCTAGTCAAAAGTGTACCAAACAACGCTTTA CAGCAAGAACGGAATGCGCGTGACGCTCGCGGTGACGCCATTTCGCCTTTTCAGAA ATGGATAAATAGCCTTGCTTCCTATTATATCTTCCCAAATTACCAATACATTACACT AGCATCTGAATTTCATAACCAATCTCGATACACCAAATCG		
P_MAS-2	*Agrobacterium*	392 bp	Chung, S.M., et al., (2005). Trends Plant Sci 10:357-361.
	TGAGATTTTTCAAATCAGTGCGCAAGACGTGACGTAAGTATCTGAGCTAGTTTTTAT TTTTCTACTAATTTGGTCGTTTATTTCGGCGTGTAGGACATGGCAACCGGGCCTGAA TTTCGCGGGTATTCTGTTTCTATTCCAACTTTTTCTTGATCCGCAGCCATTAACGACT TTTGAATAGATACGCTGACACGCCAAGCCTCGCTAGTCAAAAGTGTACCAAACAAC GCTTTACAGCAAGAACGGAATGCGCGTGACGCTCGCGGTGACGCCATTTCGCCTTTT CAGAAATGGATAAATAGCCTTGCTTCCTATTATATCTTCCCAAATTACCAATACATT ACACTAGCATCTGAATTTCATAACCAATCTCGATACACCAAATCGA		
P_Ocs-1	*Agrobacterium*	235 bp	
	ATCATTAATTTCCACCTTCACCTACGATGGGGGGCATCGCACCGGTGAGTAATATTG TACGGCTAAGAGCGAATTTGGCCTGTAAGATCCTTTTTACCGACAACTCATCCACAT TGATGGTAGGCAGAAAGTTAAAGGATTATCGCAAGTCAATACTTGCCCATTCATTG ATCTATTTAAAGGTGTGGCCTCAAGGATAATCGCCAAACCATTATATTTGCAATCTA CCAA		
P_Ocs-2	*Agrobacterium*	365 bp	Chung, S.M., et al., (2005). Trends Plant Sci 10:357-361.
	CTGAAAGCGACGTTGGATGTTAACATCTACAAATTGCCTTTTCTTATCGACCATGTA CGTAAGCGCTTACGTTTTTGGTGGACCCTTGAGGAAACTGGTAGCTGTTGTGGGCCT GTGGTCTCAAGATGGATCATTAATTTCCACCTTCACCTACGATGGGGGGCATCGCAC CGGTGAGTAATATTGTACGGCTAAGAGCGAATTTGGCCTGTAAGATCCTTTTTACCG ACAACTCATCCACATTGATGGTAGGCAGAAAGTTAAAGGATTATCGCAAGTCAATA CTTGCCCATTCATTGATCTATTTAAAGGTGTGGCCTCAAGGATAATCGCCAAACCAT TATATTTGCAATCTACCAA		
P_Nos	*Agrobacterium*	289 bp	Chung, S.M., et al., (2005). Trends in Plant Science 10:357-361.

	GATCATGAGCGGAGAATTAAGGGAGTCACGTTATGACCCCCGCCGATGACGCGGGA CAAGCCGTTTTACGTTTGGAACTGACAGAACCGCAACGTTGAAGGAGCCACTCAGC CGCGGGTTTCTGGAGTTTAATGAGCTAAGCACATACGTCAGAAACCATTATTGCGC GTTCAAAAGTCGCCTAAGGTCACTATCAGCTAGCAAATATTTCTTGTCAAAAATGCT CCACTGACGTTCCATAAATTCCCCTCGGTATCCAATTAGAGTCTCATATTCACTCTC AAT		
P_Superpromoter	*Agrobacterium*	1145 bp	Ni, M., et al.,(1995). Plant J 7:661-676.
	ACGGTATCGATAAGCTCGCGGATCCCTGAAAGCGACGTTGGATGTTAACATCTACA AATTGCCTTTTCTTATCGACCATGTACGTAAGCGCTTACGTTTTTGGTGGACCCTTGA GGAAACTGGTAGCTGTTGTGGGCCTGTGGTCTCAAGATGGATCATTAATTTCCACCT TCACCTACGATGGGGGGCATCGCACCGGTGAGTAATATTGTACGGCTAAGAGCGAA TTTGGCCTGTAGGATCCCTGAAAGCGACGTTGGATGTTAACATCTACAAATTGCCTT TTCTTATCGACCATGTACGTAAGCGCTTACGTTTTTGGTGGACCCTTGAGGAAACTG GTAGCTGTTGTGGGCCTGTGGTCTCAAGATGGATCATTAATTTCCACCTTCACCTAC GATGGGGGGCATCGCACCGGTGAGTAATATTGTACGGCTAAGAGCGAATTTGGCCT GTAGGATCCCTGAAAGCGACGTTGGATGTTAACATCTACAAATTGCCTTTTCTTATC GACCATGTACGTAAGCGCTTACGTTTTTGGTGGACCCTTGAGGAAACTGGTAGCTGT TGTGGGCCTGTGGTCTCAAGATGGATCATTAATTTCCACCTTCACCTACGATGGGGG GCATCGCACCGGTGAGTAATATTGTACGGCTAAGAGCGAATTTGGCCTGTAGGATC CGCGAGCTGGTCAATCCCATTGCTTTTGAAGCAGCTCAACATTGATCTCTTTCTCGA TCGAGGGAGATTTTTCAAATCAGTGCGCAAGACGTGACGTAAGTATCCGAGTCAGT TTTTATTTTTCTACTAATTTGGTCGTTTATTTCGGCGTGTAGGACATGGCAACCGGGC CTGAATTTCGCGGGTATTCTGTTTCTATTCCAACTTTTTCTTGATCCGCAGCCATTAA CGACTTTTGAATAGATACGCTGACACGCCAAGCCTCGCTAGTCAAAAGTGTACCAA ACAACGCTTTACAGCAAGAACGGAATGCGCGTGACGCTCGCGGTGACGCCATTTCG CCTTTTCAGAAATGGATAAATAGCCTTGCTTCCTATTATATCTTCCCCCAAATTACCA ATACATTACACTAGCATCTGAATTTCATAACCAATCTCGATACACCAAATCGACTCT AGG		
P_AtAct 2	*Arabidopsis*	791 bp	Sarrion-Perdigones, A., et al., (2013). Plant Physiol 162:1618-1631.
	ATGGAGTCGACAAAATTTAGAACGAACTTAATTATGATCTCAAATACATTGATACA TATCTCATCTAGATCTAGGTTATCATTATGTAAGAAAGTTTTGACGAATATGGCACG ACAAAATGGCTAGACTCGATGTAATTGGTATCTCAACTCAACATTATACTTATACCA AACATTAGTTAGACAAAATTTAAACAACTATTTTTTATGTATGCAAGAGTCAGCATA TGTATAATTGATTCAGAATCGTTTTGACGAGTTCGGATGTAGTAGTAGCCATTATTT AATGTACATACTAATCGTGAATAGTGAATATGATGAAACATTGTATCTTATTGTATA AATATCCATAAACACATCATGAAAGACACTTTCTTTCACGGTCTGAATTAATTATGA TACAATTCTAATAGAAAACGAATTAAATTACGTTGAATTGTATGAAATCTAATTGAA CAAGCCAACCACGACGACGACTAACGTTGCCTGGATTGACTCGGTTTAAGTTAACC ACTAAAAAAACGGAGCTGTCATGTAACACGCGGATCGAGCAGGTCACAGTCATGAA GCCATCAAAGCAAAAGAACTAATCCAAGGGCTGAGATGATTAATTAGTTTAAAAAT TAGTTAACACGAGGGAAAAGGCTGTCTGACAGCCAGGTCACGTTATCTTTACCTGT		

	GGTCGAAATGATTCGTGTCTGTCGATTTTAATTATTTTTTTGAAAGGCCGAAAATAA AGTTGTAAGAGATAAACCCGCCTATATAAATTCATATATTTTCCTCTCCGCTTTGAA		
P_AtFBA2	*Arabidopsis*	1111 bp	Lu, W., et al., (2012). Gene 503:65-74.
	CCTACACATCCACTTGGCCACCTGTTGTGCAATGATGACGATGAGATTGCAGTGTCT CTCGACTGATGATGTAGACTTCACAATCTCTTAAAAATCCCAGTACTTAACCTCAGC CTTAAGAAAACGCAGGGAACTACGTCCTCACAAAATCTTTCTCTTTGAGTGTAACTT TCAGACGCATCTTTGGCTCTAAATTCTAAAAAGGAAAATTTTAATAGGTTTTCATAA TCATGGGTTCACTGGATTAGCATATAAGTCTATGGTTGAGAAACTTGAGACCCAGA CTAACGAAACCTCTTTCCGGATCCAAAGGTCCTCTTGTGTAGTTGACGTGGTAAACT CTCTACCGTCAAATTTAGACATTAGCTAATCTGATCAATAATCTCGGCAGCTCTTAA AAATTAAAAATTAGAAATGATACGAACCTCATAATTTTTCTTTCTCTTATCAAAACA CCATCTTTGTATCTTTATAAGCCTGTTGCCACTATTTTTAATTGAAAATGATGCGTTT GTCTTATGTTTTCTGTCCTGGAGTTCAACATTATGACAATATGTATAGTAAATTAGT GATATACAAGACGTTTGCAATTCAAGAAAAAAACTTATAAACTAATTAATATTATG GTCCACGGTGCTACATATTAACTCTTGATGGTTTTATACATCTTTTCTACATGCTAAT ATGCTTTTAATATTGTAGCCTAACGTTATAATTTGTTTTTTCTTAAAGAAACAGTATC TTGAACGAATCTTAACTATTTCTGTACTTATTCGATTTTATTCGATTTTTATCCGTGT AAAGGCAAACGATTATTATGTAACGACGGGCATAAAAAGAGTATCGATTTCCTATT CGGAGAAAAAAAAAAAGATAAAAATTGGAGTGTATGTATATTTCTTGAATTGAGAG TAATACAAGATTACGGTCCAGGTGGCGGAATATTATTGGCAAGGTCACAAGAACCT CAAATAACTGATCTGAAGAGAAATATAAATCCAAAAGAGGGAGGAGTGAGAGATA AGGGTGGTGTCATAAGCGTTTACTGTGAGTCTCTCAAAGAAACCAAAGGCAGAGAA AAGAGATAACACACACAAAAAAAA		
P_AtRbcs1a	*Arabidopsis*	1183 bp	Farhi, M., et al. (2011). Nat Biotechnol 29:1072-1074
	AACATTCATACGTTTTCATTTGAAATATCCTCTATAATTATATTGAATTTGGCACATA ATAAGAAACCTAATTGGTGATTTATTTTACTAGTAAATTTCTGGTGATGGGCTTTCT ACTAGAAAGCTCTCGGAAAATCTTGGACCAAATCCATATTCCATGACTTCGATTGTT AACCCTATTAGTTTTCACAAACATACTATCAATATCATTGCAACGGAAAAGGTACA AGTAAAACATTCAATCCGATAGGGAAGTGATGTAGGAGGTTGGGAAGACAGGCCC AGAAAGAGATTTATCTGACTTGTTTTGTGTATAGTTTTCAATGTTCATAAAGGAAGA TGGAGACTTGAGAAGTTTTTTTTGGACTTTGTTTAGCTTTGTTGGGCGTTTTTTTTTTT TGATCAATAACTTTGTTGGGCTTATGATTTGTAATATTTTCGTGGACTCTTTAGTTTA TTTAGACGTGCTAACTTTGTTGGGCTTATGACTTGTTGTAACATATTGTAACAGATG ACTTGATGTGCGACTAATCTTTACACATTAAACATAGTTCTGTTTTTTGAAAGTTCTT ATTTTCATTTTTATTTGAATGTTATATATTTTTCTATATTTATAATTCTAGTAAAAGG CAAATTTTGCTTTTAAATGAAAAAAATATATATTCCACAGTTTCACCTAATCTTATG CATTTAGCAGTACAAATTCAAAAATTTCCCATTTTTATTCATGAATCATACCATTAT ATATTAACTAAATCCAAGGTAAAAAAAAGGTATGAAAGCTCTATAGTAAGTAAAAT ATAAATTCCCCATAAGGAAAGGGCCAAGTCCACCAGGCAAGTAAAATGAGCAAGC ACCACTCCACCATCACACAATTTCACTCATAGATAACGATAAGATTCATGGAATTAT CTTCCACGTGGCATTATTCCAGCGGTTCAAGCCGATAAGGGTCTCAACACCTCTCCT TAGGCCTTTGTGGCCGTTACCAAGTAAAATTAACCTCACACATATCCACACTCAAAA TCCAACGGTGTAGATCCTAGTCCACTTGAATCTCATGTATCCTAGACCCTCCGATCA		

	CTCCAAAGCTTGTTCTCATTGTTGTTATCATTATATATAGATGACCAAAGCACTAGA CCAAACCTCAGTCACACAAAGAGTAAAGAAGAACA		
P_AtUbq10	*Arabidopsis*	643 bp	Sarrion-Perdigones, A., et al., (2013). Plant Physiol 162:1618-1631.
	TACCCGACGAGTCAGTAATAAACGGCGTCAAAGTGGTTGCAGCCGGCACACACGAG TCGTGTTTATCAACTCAAAGCACAAATACTTTTCCTCAACCTAAAAATAAGGCAATT AGCCAAAAACAACTTTGCGTGTAAACAACGCTCAATACACGTGTCATTTTATTATTA GCTATTGCTTCACCGCCTTAGCTTTCTCGTGACCTAGTCGTCCTCGTCTTTTCTTCTTC TTCTTCTATAAAACAATACCCAAAGAGCTCTTCTTCTTCACAATTCAGATTTCAATTT CTCAAAATCTTAAAAACTTTCTCTCAATTCTCTCTACCGTGATCAAGGTAAATTTCTG TGTTCCTTATTCTCTCAAAATCTTCGATTTTGTTTTCGTTCGATCCCAATTTCGTATAT GTTCTTTGGTTTAGATTCTGTTAATCTTAGATCGAAGACGATTTTCTGGGTTTGATCG TTAGATATCATCTTAATTCTCGATTAGGGTTTCATAGATATCATCCGATTTGTTCAAA TAATTTGAGTTTTGTCGAATAATTACTCTTCGATTTGTGATTTCTATCTAGATCTGGT GTTAGTTTCTAGTTTGTGCGATCGAATTTGTCGATTAATCTGAGTTTTTCTGATTAAC ACT		
P_AtHsp18	*Arabidopsis*	838 bp	Farhi, M., et al. (2011). Nat Biotechnol 29:1072-1074
	AAGCTTTTCTCTTCATTTCTCTTTCTTTCTTTCTTTCATGCAAGTTCTATTGATTAGAA ACCAAAACCATGACATATCACATTTTCAATTTTTAACCCCAAGTTTCCCAAAAAGGT AATCACAATTACTTTCCATGGTCATTTCTTCTGGTTCAAGCATGACATGAACAGGCA ATAAATAAGTTGAGATTTTGATCACAGTAACTGATACTTGAATCGAATCATTTAGAT TTTTTTTTTTTTTAGTTTACTTGTTTAGTAAATATGTTGTCTATGTTTGTCACAAAAAC GTGGCTCAGTTCTTGTATATATGGAGACAAAAAAATCCATTAAAAGATTGTTGACAT TCTCGGAAATTTAGTGCCAACTGTTATTGCGAGAACTTACTATAGTTTTCCTTTGGC GAAAAGCTAATAATCTTAAATCTTGATTTTGTCCTCTTTTCTCTGAGTTAGATTTTCT TAAATTCCACTTCCGACCTATTAAGAAATGGGCTTTTGCAAAGAAGATCCGCTTCAC TGAGCCCGTATCTCGAAGAGGATAATACAACAACAAAGCAAAACGGCACGTAGTTT TAATTGTAACCAAGGATTGCATTTCGGTCTTGTTTCAACAAACGAAACTTCCTGAAA TGCCAAGAAAAATCTGGTCATTTCACCACAGTGATCATTGTGTATGTGTTCTAAAGA CTCCAAGCGAAGGTTTTAGAAAAAGGAGCATTTTCTATTCTATTCAAGAAACTCGA AGAACATTCTCTCTTCATCCTCTAACTTCCCTATAAATATGTCCTTTGCTAATCAGAT CAAATCAGCAGGAAAATCAAGAACCAAAAGTC		
P_AtHsp70	*Arabidopsis*	1982 bp	Sung, D.Y., et al., (2001). Plant Physiol 126:789-800.
	GAACTGCGAAAAAAGGGAGCAATAAAGTTCAGAAACAAGCCCTTGACTGTATGTTG AGAAGAAATAAACATTACCTGCCATGGTCTTTCCCAGTCAAGTGGCATAGGCCAAG CTCCAAACCATCCTCCAATAATTGCTCCATATGCTGGAACTAAGAGCATATGTTCTA TAATTCCGATTGGTCTAAAAGAAAAAAAAAAAGATGGATTAACAACAACATAAAGTG TGTGAATTATCATACTAGGTAGCATAAGTGACTTACTTTAGTGAAGCAAAGATACG ATGCCAATCTATCCATGATGCACCTAAAACTGCAGTTGCTGGTACAACCTATGAAA ATCAAAATCATCAGACACCATCAAAAGGTTTGTTTCAAACTGCAGAAATACACATA TGGCATGGTATTAACATCTTTTAAGTCATGGACACTGCAGCTTACCGTGAAAACAGA CATTAGAAAGGACCAGTGAATTGTTTTTGATAGAGATCTGCATAAGATGAGAAGGT AATACTCATGTCAGCTTTTGAAAATCACACAATCTCCATGCAGAAGTGAGACCACA ACCAGCATTAAGGAGCCTCATTTTTAATCTGGACAACTGAAAAGTCCAGATTTACA		

	ATCAACATTTCCACAATTAGAAAGAAATAAAAAGATATAGAGAAAGAAGATCTTAG TGAAACATACTGCATTCCAATAGGTGCACCCAAAGAAACAGCTCCCAAAGCATTTA TAAGAGCACCTATTAAACAAATCAAAACACAGGTATAGATATAGTAGACACAATCA AGGGATACTGAATCAGCAAAAGCACAAGATGAAAGCATAAGAAGCTCAGACTCAC TCACATCTTCAGGTTTAGCTTAACATCTAGAATTTCCAGGTGAACTCATTGAGCAAT CAACTTCTTTGAAAAATTAGTGAGCTATAATAAGCTGAAAAACAGAAATACTAACC GGCAATTAGTCCGACTAAGCTTCGGCCAACAGCTCTAAAGTACTGGAAATCAATGA GAAAATCATGAATACAGAGTCAAAACACACAAGACCAAAATAATACTATATGAAA AGAAACGATTTTTTTGAGCATTAAGAGTGTAAAGTGAGGATACTAGCTTGTTTTGTC AATTTCATAAAAGGGAAATGAGACAAGCACAAAGCAATCGAGTTAAAACGAGAAA TTCAGTTTCTTTAATTCTCACAGAGAACCTCAGAGATGAACTATACTCACCGAGCAT TTCTCTGGGTTTCGTCGGAACAAGCTGTAGATGATTACCACGATCGGGAACTCAATA ATCTGAATATCAACATCAAAACAAAAAGGCTAAAATTAACTGAAAAATATCCACTA GCAACCAGGTTATGAAAGAAAGTTTTAGTACCCATAGGAGACGCAGAGTGAGAGTT GGATCAGAAATGAGATCGACAGAGTATTTGTTACGGACCACGTGAAATCCGAAGAT CAGAAATAACCCAGTAATCACATAAACAGCAAAAGCCCCCCAAGTTGATATCGTGA TACTAACGGAGATTTCTGGATTCTTCTTCTCCTTCGCCTCTTTCATGGCTTTTCCTTTC TCGTCTTCGAAATCACAGAACAAGTGAAGAAAGAAGACGTAAACAAAATATTGAA AATCCTCCAGAACTTACACTGGGCCTTTTATTCTATATACGGGCCTACAAGTTTATA CCATATGGGCTTTAATAGGCCCATTTAATTATCAAGCGGTCGCCGGAGATAAAATAT ATCCCGGTCGGTGAATCCAGAACTCTCTTGTACGTTTGCGCGATTTCTCCACCTTTCC ACAATCCCCTGGGTTGTGCCACGACCTTTTTTCTCGAAATGTCTCGTTCCTCTCGTCG GATTCGTATATATAGCTTCTTCCATCGTTTCCGATTCTTCATCAAACAGATAAACAA ACAAAAGAAATCGAAAAACCTCACTTCCAATTTCATTCAATTACTGAAGCTTTTTTT TAGCA
P_At2S3	*Arabidopsis* 350 bp Emami, S., et al., (2013). Front Plant Sci 4:339. GAAACCAAATTAACATAGGGTTTTTATTTAAATAAAAGTTTAACCTTCTTTTTAAAA AATTGTTCATAGTGTCATGTCAGAACAAGAGCTACAAATCACACATAGCATGCATA AGCGGAGCTATGATGAGTGGTATTGTTTTGTTCGTCACTTGTCACTCTTTTCCAACAC ATAATCCCGACAACAACGTAAGAGCATCTCTCTCTCTCCACACACACTCATGCATGC ATGCATTCTTACACGTGATTGCCATGCAAATCTCCTTTCTCACCTATAAATACAAAC CAACCCTTCACTACACTCTTCACTCAAACCAAAACAAGAAAACATACACAAATAGC AAAAC
P_AtBch1	*Arabidopsis* 1985 bp Shih, P.M., et al., (2016). Nat Commun 7:13215. TGCCTTAATCTTGTCTGCAATGTAGGGTATTGATGTCTTGAACGGCATAGTGACAAG CAACGCCTATTTGGTAATAAATCTCGCTATGCATGCGTTTTCGAGTGGTGTTGACTA TTTTGCTGACAAGGAGGATGTTAGCTATTGTGATTTAGTGCCACCAGCTGAACCCCT TTTAAGTATAATGAAGGAAATACCACCGCTGAGATAAGGGTGTTCAATGGAGAAGA TGCAAACTGCACGACCCTAGGAACGTGAGGCAAAGAGACGAAAGTTTGGCGCTCTT GTTCCAGAGGACCAGTTTCTAGCTCAAAATCCGGTAATGTTTTTGTTTTCCTTCCTTG TGACTAGACTCGTGTATCTAACTAGCAGTAATACATTTTCAGGGTCCCTTTAGGATC ATGATCAGAGTTTCTGGTGCAGACGACTATGTGGAGTCTTTGAAATCACGGTGGACT CGTTATCACACAGACAGATGTTAAGTGGAAAGCTGGGGTTTTAGAGGACAACAAGT CATTGCACATTACAATGTTGGAGCAGGAGAAATTCTAACAGTGTCTTGGTGACAAG

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P_AtUbq3	*Arabidopsis*	1970 bp	Sarrion-Perdigones, A., et al., (2013). Plant Physiol 162:1618-1631.

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P_At3g24240	*Arabidopsis*	1628 bp	Shinohara, H., et al., (2016). Proc Natl Acad Sci USA 113:3897-3902.	GAAAAAGTGATGGAAACTCGGAAAGGAAACATAATTAACACGAGATTATGTTAAT GATTTTATTTCTCAGACTGTATTTGTATTAGATAAAAAATCAATAAACCATTAGAAA TGGAAAAAAAAAAAATGAAAATTCATTGGATCTAGCAAAAGGTTCAAGTCTAGTCA TCTTATTTCAAAGGATTCTTAATGTGTGAAATAAACAGCAATACAACTATATCTAAT TTATAGAGTAACCTTGTTTTCTTAAGATTACATTTCGGCTCAAAGGTTTAAAGTCAA GAAGATAACAACTATAGAAAGAAACAGTAAGCTACTAGAGTATTAACTAACATATA CAATAAAATATACTCAAGTAGAAACAAAGGGAATAAAAACGAATCACTGATTCAA CCACTTGCTTGGGGTTTGAGCAAACGCACTCGTTTACTTACAGGGGATTAAGCTAAA TAATTTCTTTAAAACAATCTTAATTAACTGATCCAACAGTAACATAAATAAAAATAC TTATACCCATAAATTTACGTACCAACGCATATATATCAGACGGCTATTGAGTCCAGT TAGCACAAAACTGTTGGAATCTCGATAATAGCATGAGCAACTAGTTATTTTTGTATA ATAAACTACGATGTTATATAGTATATAAGTAGATAAAACATTCTAATCTCGAAGTA ATATTTATATACACTTTTCGATTAAGCATAATTTGGCTTGTTTTAGTTTTACTTCAGC TTAGTCCTAAGAGATGAAACTGAACTTTTGTAGTTTTTACTTATATCTTTTACAAATT TAACCACATTATATTAGATCGACAAAAGGGGAATTAAAATAAGATATAAGTATGTA CATTACATGATTCACGTAAACTATAAATTACACTGCACATACCACTAGTGGTTATAT CACCAACAATAAGCATGTATCCATAGGTAATTTTGTACTAATTCTAGCTATTTAACA ATAGAATTTTCTTTTTAATAATTTTTATCCGGAATTCTATACCGAGATAATCATATTT TTTCTTGAAAACTATATTGATTAGATATTTACATAGTAAAAAAAATAGAATATTTCC CCATATTGAAGAGCATTTTAATTAACCAAAATTTTTTTGTTACCTTTACCATGTCTTT AACCAAATATGTTTAGCTATTTACTTAATATCACTTTTAAACATCTTACCTTACGACT ATTTCGTTTAGTTAGATATGTTTCTACTCTCCACGCAATGTATATGTATAATAATACT AAAGAAAATTAGTACTAAAATATTACTGGTAAAGAAGAGATAGGCCATAAATAGGT GAGGTGGCAAAGAGGTGGGGTGGTGCAGTTTTGTTGATCTCAAGGCATTGTGTTTCC

	CTATTTTCCTTTGTACTCTTTCTCCTCTCTTAAATCGCCACTCCATTATTTTAAATTTC TTATCTTGATAAAACACACACACACACAAGTATTAGAAGAACTTAAACCCTCTTATG TTCTCTTCCTAAGCTTGAGTTTAATTCAAGCAAGAAACAGATTTCGAGAGAAGAGTA AGCACAGAGATAGAGAGAAAGAAGGCACCAAACCCTAAATGGGTCTAAACCCAAG ATTTTAATCTTCTTTTCGTATTTTGAGGCAA		
P_AtJAL34	*Arabidopsis*	1471 bp	Yamada, K., et al., (2011). Plant Cell Physiol 52:2039-2049. GCTAATGACATTAGATCGTAAATAAGTTCAGGATTTATTTGCTAAAATAGCTACAAA AATGTATATATAGATTTCAAAATATACTTTTTTAATCACTATTTTTTCGTGGAGTAGC TGTCTACGAATGTTCTATCCAATACATTCGAACACGTGATTGTTCGTTAATTTTCTTG ATTCTGTAAGAGAAACAAAAAATATAGATGTCCAACTTTTTTTTTCGGGTGGGAATA TAGACGTCCAGCTTAGCTACGTACTGAATAATTCAAAGTTCCAAACTAGTATATATT AATACAATTGACGATAAGGTCATAAGGATCGATGGATTCCAACGATTCGATACAAG TATTAATGAAATAAGATAACACGATTGTGACAGCAAACTCTATATTGATATTTCTAT TTTTTAATTAGCCATGCGTTGCACGATCAATTTACAAAATAATAAAAGAAAATGATC GATCAAAGAGCATTCCATTGAAATTTAATTCCATCCTGTAATCACATAATTTTGGGC CCAATCCTATTTTTCAAATGTAACATGCTATTACATAGTCACATAGAACATCCTAAA ATAGGGTTAAAATGTACTTTTATCTATTTGCAATTTTGATATTTTCCTTTCTGAAAAA GATTAGTATATGGCAAATTATCTTTTAGATAAAAGATCTTTTGTTCTGACTATACATT AATTTATTTTAAAAAAAAAACTTAACAGATATATTTGCAAATACAAAATGATGAAA AATAAAAGGGATACCATAATCTAAAATCTGACAAAGAAAATATACAAAAAGTCAA TTACGATACTTAGAAAAAGAACTATATATTTTTGGGTAGGGAAGTTCAAAAACAAA TTACCGATTTGCTGACTATATGAGCAATTATTACATACTTTTATTTATTTGTACAACA ATTATTACACATACTTGTGTGGACCAACATGATTAATTTTATATTGGCCATATGGTG CGTAGTAAATGTTATAATAACTTGAAATTAAATAATAACTAAGCTCGACTCGATATA TAGATCCAACCAGTAGCCTCTCTTATTCACACCTAATCTTCATCTTCATCTTCGCATT CATAGTCTCTACGATCAGGTAATCCCCCTCTCTCTATCTATCTTTCATATATGTGTGT ATGTGTAAACTATCTATATTCTGAAAATAGATCAATCAATTGATCTTTTCCTATCTCA ATTGTTTTCACAACCATCAGTTTGACTTTTGATCGTTTAAGGCTCGAGAGAATTATC ATTCACTGTAGTAAAGATAGTTTATACCAACAAACCCATTTGGTGTTGACCAGCTTT CAACATAAGTATGAGTTAGAGCTAGAACCGGATTAGTATTAATGTTACTTGTACCTG TTCATAGTACTAACCAAAAATGATCCAAAAAAATGAAAATAACAAATAAACCATTT ATGGTTATCACAGATAGATAAAAGAAGTCAACAACG		
P_AtWRKY6	*Arabidopsis*	1718 bp	Robatzek, S., et al., (2002). Genes Dev 16:1139-1149. GTCGGTGACAAGCAACGAAACATAAATAATCGACTTTGTCAAGATATGTATAAAAA TCGACTTTGTATTTAGAGAACAAGGTCTTCATTATTTTTCTTTTTTAACATTAGAGAA AGAGAACTAAAGGTCTACTTCAAGAAAACAAGAAACTAGGTGCTTAGCTTTAATAA TATATCAAAGAAAAATGGGTCAAAAAATAAATTATTACATGAGTGGGGCCCGGCCG GCCACGGAAGTAAGACCTAACGACCAGCGCAACCGGTCACCAGTCAAGACTATTAG AAGCCGGGCCGTCAAAATCGTTGACTCGGTTTTTGTTTCCAACTGTTTTTGTATTTTG TTAAAAATAAATTAATACTAATAAATAAGCTGAAAAAAAAGAAAAGAGAAAAGGT ATAATCACGTGGAACGCGCCGCAGTAAACGGAGCGGTGGATCAAACTTTTCGTCCG TTTGATCAAACAGAAGAGAACTAGTCAATGCTCTTTCTTCATATCACAATTTAATAG TCTCAAGACGATTACGCCACATAACCATTTTCTCGTGATTTCGACATCAAAATTTAA TAAAAGGAACTGATTGATTGGTCATCATGTTACAAGTGTCAAATGAGCTAATCCGTT		

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P_AtHY5	*Arabidopsis* 1700 bp Chattopadhyay, S., et al., (1998). Plant Cell 10:673-683.		
	GAGCATTGGGTGTTGGTGACGATGTTGATGACATCGACTTGTTTGGTTCAGTCACTG GTGATGTTGATGTTGATGTTGATAATGATGATGATGATAATGATGATGATGATAATG ATGATGATGATGATGACAGCGAAGAAGATGAAAGACCGACTAAGCTGAAGAATTG GCAGCTTAAAAGACTGGCTTATGCATTGAAAGCTGGGCGTCGTAAAACTAGTGTAA GTTTTAGTTCAGTGTTGAAGTGATGTTGAATACATTGTGTAAAGCATAGTGCTTGAG TTAGTGTCTGCTTTGGAGATTTTGCTTACGAATTGTTTAAGAGTTGACAAAGAACAA GTAGTTCTCTGGTTTTCAAATGCATAATTGATAACGGATGGTTTTGTTGTGATCTGTA GATTAAAAATCTGGCAGCTGAGGTTTGTCTTGACAGGGCTTATGTTCTTGAATTGCT TCGTGACCCGCCTCCAAAGCTGCTAATGCTAAGTGCTACACTACCAGATGAAAAAC CGCCAGTAGCAGCACCTGAGAACTCCTCACCTGATCCAAGTCCTGTGGAATCATTAT CAGCTGAAGATGTTGTGGTCGAACCTAAGGAAAAAGTAAAAGATGAAGCAGTTCAT GTGATGCAACAGAGATGGTCTGCTCAGAAAAGAGTGAAGAAAGCTCACATTGAAA CGCTAGAGAAAGTTTACAGAAGATCAAAACGACCCACTGTAAGGATTCTCCTTTTA CATTTGAATCAATTTCTATGTTACTTGAATGCTCTATCTCACATATGATCATGTTTGA TGATGCTGTGAATAGAATGCTGTGGTTAGCAGCATTGTTCAAGTGACCAATCTTCCA AGGAAGCGAGTTTTGAAGTGGTTCGAAGATAAAAGAGCAGAAGACGGAGTTCCAG ATAAGCGAGCTCCATATCAAGCTCCGGTTTGATCTAATGTTAACGTTGAGATGGCAA TGATTTGTATACTTGATTCTCAGAAACTCATCAACATTGTCGTCAAGGACAAGTTTT TTTGGTGATACGAGGAGTGTTTATAGTAGTAGATTCTGTCCAATGGTGTGGCTGGAT ATGTTGGACTATGAAATTTTAGGATATCTTGTATTCAGTTTTTAGTTATTTCCTTGCT GAGATTGTGTCTTGTAGAAAACCGTTTCAACTTTGTTTGGTTTATGGCGGCTATAAA GTTTAATTTTAATGCATGACAAAAACAAATCACCAAAAATAAAATAAATTACTTTC ACGACACTTTTGAAAGCACTGCCCTAGGCGTGGGCCATGTGACAGAATGAAAGAAC

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P_CasP1 | *Arabidopsis* | 2088 bp | Naseer, S., et al., (2012). Proc Natl Acad Sci USA 109:10101-10106.

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			GTATCTTCCATTAGTTTCCCACCACAACTACAAAACATTCCAATACACAACACACAA AGCACACACTTTTTCTTTCTTTTAAACCCCAATTGCAAGAGAA
P_DAISY	*Arabidopsis*	2047 bp	Naseer, S., et al., (2012). Proc Natl Acad Sci USA 109:10101-10106.
			GGAGATTAAATGCTCGCTTTGATTGATGCAAACAATTTCTTCACTATAATAAGCGAA AATAATAGAAATAATAAAGATGGAAAACTAACAATTAATAGTAGAACTATATATAT ATATATCCACATATAAATTCTTTTTTTTTTTGAGGGGTGGTTTAAAACTAGCTATTTA GCTGGATGCTCGGCTATTCGGATTTGTGTAAAATACTTCTAAATATTGAGCAATAGG TAAATATAGTGAATATTTAACCATGACAAACAATAAAACACACACACATCAGAGGA AACTTGGGAATGAACGTGAACAATAAAAAAAAAATTAATAATGATAATAATAGTG GGCATAGAGATGGTTCTTCAACGAATTATTTCTTGCCCAAGTAGCACCGTTTGGTTA GAAATTCTTCGACATTTATAGTTCAATTAAAAATTACTACTCCATAATTTTGGGTGA CTTACCACACAATCTTTCCACAAATCTTCGACACGCAATTCACAACAGTATCATAGT TTATTATCACACTTTAGTAATTTATGCCAAACCTCACTACGCAAGCAAACTATGATT CATTAGATGTGTGGACAATTACGACGACAGCAAAAAAATAATATGTGTGGACACAC AATGACAAACTCACATTGAACTATCTTGAAATAAATTTATACTAAATCGTAGCGAAT ATATAATCAGTAAATAGAAGTTAAACTGAAGATCATAATCAACTAAAATGAATATC GTAATCAAATTGATGATAATAATGATTTCAGACACAATAATGGTGACGGTGTTGAT GATGAAAAGGATCTGTGGCATAACAACTGATTGAATTCAATGCATCTTCATGGGTTT TATTCCGTTAGCTTTATCTTTCACGTCTTTATATTCTTTAAACTTTGTTATGTTATTGA CATTTAAATTCATTTGTATGCATGTTATGAAGAGATCGTATAACTACAAAAATATAA AGGTAAATCTTTCATTTTAAAAAGAAAATGTTTCTATACGTGTAAATAATTAGTAAA TAACACATATTTCCTCCTGCGCGTAGCAGTTCAACAAACTCTCTTCTTCGCGTAGCT AGAAGCTGCAATAACATAAAGAAATGATATATTTATAAATTATGTGAAAATGAAAA AAAATATTAGTCCGCAATATCCACGTATCATTATGCGCCACGTAAACAAAGTGGAC CCAGAATAACCCTTGTTTCCAGTAGAAGGAATCAATCAGTGGCAAGAAAGAAAATA ATGAATTTCATTAAATCGCCACTCTCGAGCCATCAAAGTATCAAACAATTGATTGGA GTTAGTTGTATCCTTCGCCTACAAATTTTTCCTTACTCTGTTTTATAAGTATATAATA GTTCCACTAAAATCATTTTGGATACAACCTCAATAGATCTCAGCGTATTGTTTCCTG TATGTTCAATGAATCCATCCTCCATGCAATCTGGAGACTGGAGTATAAAATAACAC GTATGGTATGGTATTTATTTCTCATAGCTAGTTCCTTAACAGTTGGAAGAATTTATA CATGACCCGGCCCTTTAAAACCTATCCCTACTACAAGACATTTGGGTTACTTTCCAT CGACTTTTGAATGTGCATCAGGCATGAAAATCCTTTAATTATGCATATTTTATAATC AATGCTTAAATTACTATAAACACAAAAATTGTAGTGATATATTAGAAAGATAATTT AAATTGTTACATTGAAAAGATAATAAAAAATTATAAATAGACATCTGATATAAAAA TGGATGAAGTATAGCATATTAAAAAAACATATGTTTTTGGTCAAAACAGAATCAAT GCATAGTTAGCTCACCGCTACAACAATAACCATAGGGACTACGTACCATCCATAAC TACATTTTCTTAAATTGCATCCTCTTTCTAAAATTTTGCCTATAAATTCACAATAACA CTTCAACTTTTTAGGCCATAAGTTATCTCTTTCTCTACAATAAGCAATAAATCTCACC TCCCTTTTTTTTTTTTTTGTCTCGCTACTTTTGATTATCATTTAAAACCAAAAAACCTA CC
P_KCR1	*Arabidopsis*	2223 bp	Naseer, S., et al., (2012). Proc Natl Acad Sci USA 109:10101-10106.

			GGAGCCAAGAAAGTTGGAAGAGGAAGTTTTGGGTCTGTCTACTATGGTAGGATGAA AGATGGGAAAGAAGTTGCAGTTAAGATAACTGCAGATCCTTCTAGCCACTTGAACA GACAATTTGTGACTGAGGTATTGTCTAATTTGCAGCCATTAACTTGCTGCAAAGTTT CTTAATTAGACGATTGAATTAAACCAAATGTGCAGGTTGCTCTATTATCGAGAATTC ACCACAGGAACTTGGTTCCTTTGATTGGATATTGTGAAGAAGCAGATCGGCGTATTT TGGTTTACGAATATATGCATAATGGAAGCTTGGGAGATCACTTGCATGGTATTTACC AATTTCCCTTATATTTTCCTGCCTAAGTTACGGATTTCATTCTGTGAATAACTCATGA AATCCATCCTGTTAGGTTCAAGCGACTACAAGCCACTAGACTGGCTAACTCGGCTAC AAATTGCACAAGATGCTGCCAAAGGTTTGTAGCACAATCTCAAGATTAAATCTTTA GTGTGGCTATAATATGAATCCATTGGACAGACAAAACTTCAGATTATTACAGGTCTT GAATACTTGCATACTGGCTGCAATCCTAGTATTATTCATAGGGATGTGAAATCAAGT AATATTCTCCTGGACATTAACATGAGAGCCAAAGTATCTGACTTTGGACTCTCGAGA CAGACAGAGGAAGACTTAACTCATGTATCCAGTGTCGCAAAAGGAACTGTTGGATA CCTTGATCCAGAGTAAGTCTAACAACACAACCTCACAAAAGTATCCCTTTTTATGAA CTTTGACTGATAGATGCATTCTTTTGACAGGTATTATGCTAGTCAGCAGCTGACTGA GAAGAGCGATGTCTACAGTTTTGGCGTTGTTCTTTTTGAATTACTCTCTGGAAAGAA GCCAGTCTCAGCAGAAGATTTTGGTCCTGAACTGAATATAGTTCACTGGGTAAACA CCTCTAATCTTCTGTCCATTTTCACCTTTGACCGTTTAAAGTACTACATGAACAACAT CAAGATTCACAAACCACATATCCTCTCTATGCTTTTCTTGTTCACCAACAGGCAAGA TCGCTGATCCGTAAAGGAGACGTGTGCGGGATCATAGATCCATGTATAGCAAGCAA CGTGAAGATCGAGTCAGTCTGGAGAGTTGCAGAGGTCGCAAACCAATGTGTTGAGC AGCGTGGACATAACAGGCCAAGGATGCAGGAAGTAATAGTGGCAATACAAGACGC GATCAGGATCGAGAGAGGAAACGAAAATGGACTGAAGTCATCGAGTTCAAGCAGC TCAAAGGCACAATCATCTCGTAAAACCTTGCTTACTAGCTTCCTCGAGCTAGAGAGC CCTGACATCTCAAGAAACAGCCTAGCTCCAGCTGCTAGGTGAGTCCTCTTAAAGCTC GAGCTCTCATGTTTACCCTTTGGACTTACCATCGTCACATAGATGAATACATTATAT ACGTATTAAAATGTGTGTATGTGATGTAGTGTCAAATTTAATCTGTATCTCTTTACA CACTTCTGACATGACATTGTGTAGATGTTTTAGTTGATGATAGCACAAAACCATAAT TTAATTATTGAAGGTAACAACATAATATGCTATCTATCTCCTATGCTGATGAAGACG ACAAATTTCCAAAAACAATTCTTGCATGTCTTGTGTCAGGGAGTAGCCAATTGTCAA AAGACTCGAAACAAAATGATACAAATGCACCACTCATAATTTCACGATCAACCATT TGTCACAAAACCTCAAGAAATCTAAAATTGTGTCTAAAACAATGTCACACTGTTTCC TATGTTTTGTTTACCACTTGGTTTCCTCCTCTATTCCGCTTTTACCATATGAAACCTTG TTTTGTATTGCACAATTCACCATGAAAGCCTAAATTTACCATTTTTGGCAAGTAAAA TAATCTGTCAACATCAGAAGGTGCCAACTTCAATACTCAAACATCACATGAAACCA AATTTTAAGGAAGAAGCCAACACAAAGACAATAAAATTAATCAAAAATAAACAAA GGAGAGAGACAGAAGAAACAGAGAGAGTAGTTAATTCCGGTGGTTTTCTGCTCATC TACTTCTATCCACCTTCGTCCCTTCCGCCCCAAAATTCAATTCTCTCTTCCTTTCTCTC TCTTTCTCCTTAAAAACTCTAACTTTACTCATCTCATCTCCAAAGTCTCAACCTTTCT TCTCT
P_HORST	*Arabidopsis*	2055 bp	Shih, P.M., et al., (2016). Nat Commun 7:13215. GGAGTATGCATCGATGATGATTCTGCCTCACTTAGAAGAATCAAAAAGCTAAAAGG AGCTGCGAATCCTGGGCAACGATGACTTAGTATGTATAGAAGAAAAAAAAAGCTTT TACTTGGTATCAAACAGAGCATGTGTTGTTGTATTTGCTACCTTTTTCTGCAAAGTTA

			TTGGCAATTGTATTGTTGTTCCACTTGTATATATACAGAGACCATTTATGTTAATATA CAACTTCGTATGGGGAAAGATGATTCCATCAAGTCCAAAATGCCAAAACCATGCAC GATCTTGTCTGATCAAGTATGATAAGATGTGAGATTTTAAGAACGTGAAGCTTTTCA TATTGTATTCTCAATGAACGAAGAATTAATAATTAGAGTTAGAAATGCAGATTACA GAGATTACACAATTTGATCTCATTTCTTGGCAAAGAGGCCCAGGCCACCGAAGCCA CCGTCCTTCTTTGGATTCCTGTGTGTTAATTTTCGTGTGGCTTTAGTTACAAAGGGAT TATATTGTCAGCGAATCTGAGCCGTTGGATCGTTTTGACATGAGCTTTCCATAAGTG TCTTATCCTTTGTTTCTCTCATTTTTCACATATGTATCAGACATTTAATCAAGCACAT ATCTACGTGTTGATTATGTTGATGATGCTGAGATTATGTTGATTTAGAGAATGAGTA TTGGTGATGATGGTACACGTTAGTAAACATATGAATTTGGAAGTGCCACGTGAGAG GGAGCAGAGTTTTGGGCTTTCTTTTGGTTATGTATTTGCATTCTTGTTGTAACAAATT CTCTTATTAAAAGCATTGTGAAAAAAACCAAATACCACATAGTCTATGTTTCAAGAT TTGTTTTTTAATACTATAATTTTCTATTACTTTAGTTTGTGTAATTTTTGAAAAGAGA AAATTGGTATTTTTTAGGATTGGGTGATCTGAAATTTGACTACAAAAATTTTCTTGG ACACAGACACACAGTCACACAAATAAGCTAATTATTGGAATTTTATCTTAAGTTGCA TTCACTTTGCAAATTAATATTGAATTATAGACTATTAGTGTATGGCGTGATGGCAAA CAAAAAAATCAGTGTGTGATATTGTGGACTAGCCAAAAAAATTTTCTGATGATTTTT TTGCCTAAATAATTTGAATTGTTGAGACCGAAACTCTTACTAATATACTAACAATGT AACGCGACAAATAAAACATTGTTGAGAATAAAATCTGAACCATCATAACTATAGTC TATAGTAACCGTCCGAATTCAACCACATATGTATGATCTTTGCCATTTTTGATCATAT TTTCCGTTGCGTTTTCTTTGAATTTTCTCAATATATTTTTAGTGTTTTGATTTGTACTT TTATCTAATTTATATAATTGTTTTTCAAATGTTTCGCAATTGTGCGTTTAAGTATTCG ACTCGAAGTAAACCCAGTTTCTTAGAATGGGCTAACTGCCATTGACCAAATCTTTAT CCGCGAAGAAAGATCTTTAGCAGCTAGGCTTATTTCATATCAACAAAAGTATATATT TATCTCTAACTAAATTCCTACAATTATTTCAAAAACATAGAAATTAAAATTTGAAAT GCCTATTCTTTTTTGGTTATACATTGCAAAGGTTATGTATGTAATTTCTGATCTTGAA ATTTAAGTTCTTTAGCCCATATCTAGTTGATTTTCACGAAATATTGTCGTTTACTCTC GTTTTTATATATAAAGCATGTACATATAACATATAATCAATGCTTCAAAAGAAAAA AATAATCATAACTAAATTGAAACGGGAAAACTAATTTGCTTTCGTGTTCTATTATGC CAAACTGTACTCACAATAGTCTTATCCTATCGACCCAAATTTAATCTTCCCAACTAC TTACTCCTAATTGAAACAAAATATAACCTTTCTTACTATAGCCTATATTTAAAAAAT ATCTATGATTTCTACATTTATATATATACGCACACGGCACATACCTCTCATTCACCAT ATATGCCTCTTAACAATCTCTCCACAGAACAAAAGCAAAAAGCCTAAACCGGGAT
P_GPAT5	*Arabidopsis*	2153 bp	Shih, P.M., et al., (2016). Nat Commun 7:13215. TGATCGCAAACGTCAATGGTCTATATCCATCTCTTGGGGATACACCATTCAGATATA CACTTACTTCTTGACTGCTACGGAGCTGACTACGCCGTTGCAGACCTTCAAAACTTG GCGGTCTTCCAGCGATGGACCTTTCGTGTTTAACACTCGGCCCTTGAAACCTGACCC CTGTGAGCGTCCGGTCACTTATTTCATGGATGGTGCCGAGGATGTACGGGATAGTG GGACGAAAACTTGGTATAGCATAGGGGATAAGAACTATGGTCATTGCGGAAAGATT GAGCATACTCGATTAACTAAAGTGAAGAGGATATTGGTGACTTCAATGAAGACGGA TCCTGAGTATTGGAACAAGGTACTTAGTGTTTGTATATTTCTCATATTGAATTTAAC ATTTTGGGTGAGTTTAGGTTACATCTTTTTTTTTATTTTTTGCTTTTGTTGATAGGCAC CGAGGAGACAGTGTTGTGAGGTGATGGAAGGAAAAGTAGGAAAAAGAAAAGAGA AAGAAATGTTGTTAAGGATTAGAAAATGCAGATCTTTGGAGAAGATATAAAAAAAG

	CGTTTTAATTAGAGAGATTTTTGCACATACAGATTTAGATTCGATCATTAGTTATTTG TTTCTAAATTCCTCAATTCCTAGTACCAAGAGAATGACGATTTTCTCTAGTAATACT GGCACTCTTCGTTTTTCAACATGTAAACATTACTTTGTATAATTAGTCTATATCAAAT AAATAGTTACAACATGAACGTAACTATTTATACACGAGGGTAAATTTTTAACAAATT TAAACCGAACCAAAAAGATTTCAGTTAATCATAGTTTTGTTACAAGCGAAATCTGA AATATTCACCCTCAAGTTTGTTACGTAATTGTCTAATCTGTGTTTTTTTGTGCTAGTG TTATAATTGTTTCCTCGAATGTTAAGCACCACATAGAAGTATACACTTTTCTTTTATT ATTTTCGTTCTTCTTCCATTTAGAAACTTTTATTAATTCTACTGTTAAATCCAACGTT ATTAGTTTATTTTCTCTGATGAAGTTCTAATTTTTTTTGTTTGTTGGAAAAAGGGTTA CTTTTCTGATGAAGTTGCCGATTTGTTTCCAACCAAACCTCAGCTAATATAGTTAGG GAGACGGATAAGAAATTGCATAAAGGGAGAGGCTTTGTAAACACGCAAGTTTACGT CAACTTGACACATATAAACTCGTATATAGGAATTGTGTAAAATGTTAATCAATATAT GTTTATGAATATAGTCCTTTTATTTCCTTAATCTATAGTCATGTTATCATCATATCGG CAAGAAAATTACTATTACAACATATGTTTCCGTGCTTCGATTTGTCGATCAGGTAGG CAACCAAACCGGGCCAGATTAGTCACAAATGAAATTAGGCTCCACTTTGGCAAGTT TTTTCACAATTAAAAATTAGAAAGTCTAACCAAACTAATAGAAACTGAACCAAACA AAAATGTTCACGCAATTACGTAGCACTTCTCTATGAAATACTGTGGATAATTCGATT TGAGCTAATCTATGGTAAGTCGTTTCTCTCAAACTGAATTAAGCTAAACCAAACCGA AAATAAACCGTTGTAGAACACCCATAATAAACATATATATGTTCTCTACTCTTATTT GGCTATTTTTCCATTTGCAGATACGTGTGACAACATTCCAAATATAGGCACATGATA CAAATTACAAAGCCAGAAATTATAATTTATAAACTATACATAATAAGGTCAGTAGC CTAATTACATCCATATATTTAGTTGGGCATAATAAGGATAGCCTAATTTTGGTGCAT CCCGCCAAAAATTCGGACAAATGGTGAATTTCAAACCATGAATTTCTTTGTTATACA TACATTACGTGCACTATTACATCAAAGAAAAATAGTGACGTGCATAAACGTATTTTC TTCACATAATCTATATATAATATATACAGCCATGTACATTTTTCAACATAGAAAAAT CATGTATACAAATACGGTAGGTGCAATACTGATAAACTGCCATTCCCATTGCATTAG ACGCTAGTCAATCCAAACCTTATAACATAAAAAGTTATAGTCCATTTCTTTCATATC CAATCGAGTCAAAATAATATTCGAGCAAAAAACAAAAGA		
P_ASTF	*Arabidopsis*	2081 bp	Shih, P.M., et al., (2016). Nat Commun 7:13215. GGAGCAGGGTTCTTCATCATCATTCACATGAAGATCAGCAGCAGAGTGCAGAGGAA AATGGTTCATAAAGCTCAAACCTTTAAATGGCTTTTAATTAGATATATTTAGCGAGA ATGTGATTGCTAGTGAAATCTCAAACTTGATAGCTTATTCATAGCTTATTTTACTTCG ATCAGCAAGAGAACAATGGTTCCTAAAGCTCAAACCTTTTTTGGCGTTTGCTTTAGA TTGTGCATACATAAAGTGAGAAGATGAAATATGGTTTTGCTGAAATCTCAATGTGCT CATTCATAGTTTATTTTGCTCGACCTTTCTTTAATCAATAGCTTTGATGTACTGATTA CTTTATAAAGTTAAGAAGTAAGTTCTGCTCTTTAAACTGTACTGAATGGAGGCTTCT CTGCATAATTAAGCAAACACTCTGATGATTGAGTTTCGTTGTACAAAGGAAAGTTTT TGCCTTAGTTAGAAATTCATCTTGTTTCTTTGCCCAGAAGCTGGCTTGCTGATAGAA TTTGGACTACGCTACGTTTTCTTGGGTGAAAAACAATCCGCGTCCTTCCACGAGAAC AGTGAAACTGTACGATGTTCTTATTGTATTGTGTCAACAGCCCATAATCAATGAAAT GGGCCTCAATGACAGTATAAGCCGAAAAATATTCGAATGCGATCTAGAACTAATCT GAAACCAAACTTCTCAAATCATTAACATTTGATTAGGGCCTAAAAGTCCATCCGTAT TTTAAAAAAAAGTTGATAACAAATGCAAAAATACAAATATACATTACTATTAAAAC TCAATCTTTCTGATTATATGTGGATGGAGAAGCTGTTTTGCAGTGTGGATTTGAATT		

	TTGAAGTTCTTGTTCAAAAAAGAAAAGAAACTTGGTCAAGCTTCAAAAGAAAGAAA GAAATAAAGACAAGTATACAAATACGTTGACTTCAATTAATATGAAGATAGAAGAG AAAGATATAGAAATGCGTTTTAAATTGGCGGTGGGAGATATGTGATTCCCTTGGTCC CGCTTTCTCGTTTGATTCGGTAACCTAAACCTTCTCCATCCAAGAAGACACAAACAA GGAAGAAATTAACCTACGTACGTACATCATTTGAACTACTTATATCTATTATAAATG GAAAATCTATTTTCTTCTTCTCTCTCTTTTAACCGAAAAAGGAAAAGTCCTCGAAAT AACTCTTTAATATAATTCATGTGGAAACCTTCTATATATTTTTTGCATGCTTTTTTGA AATTAAGTAATGGCATACTAATTAGAAGAAGACGAAAAATAATATGTCTAAGTAAT TGAGTTTCGTGGTCAAGGCAAATCAAGATTGCATTCTTTAATTAAGTGTACAAATTA TGATGTAAGAACCGTTATTTGGCATAACCTAATATATATTAAAAACTGATTTTTTTTT TTTTTAACTTCTGTAAGAAATGGTTTTCTTAATTACCAATCATGATCTATTATTGTAA AATGTGTAATTTTGTGTTGCGATTGAAGTGTTCTTAGATAAAGATATGTCATATGCA TGATATCATCTATTTGATTTTGAGAAAATAAAAACATAACATGAGAACATCGTAGA GAGTAAGATACATGACAAAGAGAAAGAATAAGCTAAGAAGTCATCCAAAAATTGG GAGGCCTACTCTCAACTACCAAAAATACAAGTGTTTGTTGTGTTAGGTCATTTATTC AGTCACCTAACCCTAACTATATGAAATACGTTAAAATTCATATATAGAAAAATAAA GAAGAAATACTATTAGTCAATATAATTTTTTTTAACAAAATAAAAATAAAGAAAGA AACACTATTAGTCAATGAATTAAAAAAAAAAAAATCCATCTTTCGATCAAGACCGT CCAAGTATTCTCCTTTCACATAACTCTTACGTTTTACACTAAACAAGACGAGATTTTT ATGAGCTTGTGGCTCCCACAACAATCCTCATTGATTTCTCCATATATATCACATGAG AATCCAACTCGACTTCATACTAACATTCATCCCAAAAGTTCCATTCTTTTTCACAAA GCCATTGTGCTGTTTTCTCCATTTGGATCAA		
P_FAR4	*Arabidopsis*	2065 bp	Shih, P.M., et al., (2016). Nat Commun 7:13215. GGAGAGTTCTAACCCCGACATAAGGGATAGGGCAGCGGTGTATGGACCTCATATTT AATATTAAAAAATTATAAAAAAATTGTTAGTGGTATAAAATACTCTCGAAAATATA AATACATTTTTTTTTGTCACAATAATACATATTTATATTTGCAAATATAGAATTTTAT TTAAATAACAAGACTAAAATCTTCTTTTTTTTCCCTAAGGCTCTTTTTACAGTTGGGC CGGGGCTGATCAGTTCGCTATTGAAGTATACATGTCAAAGAAAATGAAGGAGAATA AACCATCGTATTAATTAAATCGATTTGACTAATGAGACAACTTAATTCAGCTTTAAT ATAGTTTAAATTTCGTACATGACCAGGTAATCAAATTTTCTAAACAAATGGAACAAT ATCAGATAGGGTAAACTGTTACCATCTGTGTAACTTTGCAAATTAGTAAGTCTAAAT TATAAGAAACGATGACTTGTACTTCTAAAACTCCAGCATATCATATAAAATTTTGAG GTTTGAGACATTTCTATAAGTTCAGATTTAATTCTTCCTAACGTATGAGGTTAGGTA TTTTCTGTCGCTTTACCAAAAAATTTGACGTTTCCCATACGTTTTAGCTTGTTATGTC ATTGTTGCATAATTTATGACCAACCAAACCTAAGACCAAATCAGGTTTTTAGATAGT CCTTTTTTCCTTTGAAATTATAAGATGTTTTGGTTGTATTGGCATAGATTACAAAAAT TACTCCCCCCATTTTAGATTAGCTGTCGTTGAAGATTTTTACAGAATAATAAAAAAA CATTCAATTTTTCTGTTTTACCCTAATTAATGTATTGTTATATTTGATATCATCAATA AATACGTTTAAAAATGTTGATAAAATTGGAAACTTTGTCAAACATCTGCATTGTAAT ATATAATCTAAAAAAAATGATTTCTTATATTCTATCAAATATGGCTAACTATACACA TATAATTTGGGCTGAGCTGTCATCTTTCGACATGAAATTACTCCGAATTATACATAA TTTGCCAGAGAAGTTATGTTACATAACAACACTCATATTCAAAAGAAAACTAGATG TATAATGTATTAGCTATTATTTAAGTAACACTAACAACTAAATAAAATAGAATGGAT GAAACTATAAAAAATTAAGAATTATTATTGAATGAGTATATTTTTTTCTATTTTGGT		

	CAAACGTCGAGGTGGAGTTTAAGAAAATCGTGATTCTAAAATAGTGCAATAATGAA ATATTAAAAAATCACGTTATCATCTTGTTCTTTTATTTTCCACTATTTTCTCTTGAAA TTTAAATGAAATATGTTATTTTCCAAAATGTTGTTACAACCGATTTACTATCTCATAA ATATGTTCTTTTGTGATTTTAATTTTTGTATTATTAATGTTCCCCTGCTTTTTGTTGAC TAAACAACTCGTTACTCGTTAGATATATATTCACGTTGAGAAAAAAGCGTTTAACCA AAACACTTAGGTATATTGAAGAGTTCTAAAATTAGAACGCCAACCTTCCAAATCAA CACACCTACGACAATTCTAGTCCTACAACATAGATCCTTCTAGCAAACCACAAGGA AACTTCTTGTGGAAAACACTAACACTATCCTCACTCAGTTACTCTCGTATTGCTCTA CCTAGAGTTTCTAATTCTGCTATGTTATAAAAATTCTTACATACTTATTCTTTTTTTTC TTTCTAAACATTCCATTCGTTTTAAAAGCTAGGCCCACGATTAGTAGTTAAAATATT TTAATTTTTAAAAATATGGGTTACATATTTTTTATTCTTTTTAGAGCTCCGAGATTTC AGAGCATGTTCTAATTGGATATGTGATATTTAATCAGAAGTAGTTTTAATATTGTTT TTTTTTTATAAAAGAAAATGTAGGTAGGTTTACGTACAAGTAGTAGATATGATGGCT CAACAAAACGGGTCAACATTTACGGGTCTATATATATTCGTGCCTCATCGCCGAAG GTGTTATGGTTCAAAACAATCTATCGTACTTAGTTATTAATTGGATAGATATAAGTT TCTTC	
P_AtIRX5	*Arabidopsis*	1990 bp	Gondolf, V.M., et al., (2014). BMC Plant Biol 14:344. GGAGATGAAGCCATCCTCTACCTCGGAAAAACTTGTTGCGAGAAGAAGACATGCGA TGGCATGGATGCTTGGATCTTTGACATTGATGACACTCTTCTCTCAACCATTCCTTAC CACAAGAGCAACGGTTGTTTCGGGTAAATAAACTAAACTTAACCATATACATTAGC CTTGATTCGGTTTTTGGTTTGATTTATGGATATTAAAGATCCGAATTATATTTGAACA AAAAAAAATGATTATGTCACATAAAAAAAAATTGGCTTGAATTTTGGTTTAGATGG GTTTAAATGTCTACCTCTAATCATTTCATTTGTTTTCTGGTTAGCTTTAATTCGGTTTA GAATGAAACCGGGATTGACATGTTACATTGATTTGAAACAGTGGTGAGCAACTGAA CACGACCAAGTTCGAGGAATGGCAAAATTCGGGCAAGGCACCAGCGGTTCCACACA TGGTGAAGTTGTACCATGAGATCAGAGAGAGAGGTTTCAAGATCTTTTTGATCTCTT CTCGTAAAGAGTATCTCAGATCTGCCACCGTCGAAAATCTTATTGAAGCCGGTTACC ACAGCTGGTCTAACCTCCTTCTGAGGTTCGAATCATATTTAATAACCGCATTAAACC GAAATTTAAATTCTAATTTCACCAAATCAAAAAGTAAAACTAGAACACTTCAGATA AATTTTGTCGTTCTGTTGACTTCATTTATTCTCTAAACACAAAGAACTATAGACCAT AATCGAAATAAAAACCCTAAAAACCAAATTTATCTATTTAAAACAAACATTAGCTA TTTGAGTTTCTTTTAGGTAAGTTATTTAAGGTTTTGGAGACTTTAAGATGTTTTCAGC ATTTATGGTTGTGTCATTAATTTGTTTAGTTTAGTAAAGAAAGAAAAGATAGTAATT AAAGAGTTGGTTGTGAAATCATATTTAAAACATTAATAGGTATTTATGTCTAATTTG GGGACAAAATAGTGGAATTCTTTATCATATCTAGCTAGTTCTTATCGAGTTTGAACT CGGGTTATGATTATGTTACATGCATTGGTCCATATAAATCTATGAGCAATCAATATA ATTCGAGCATTTTGGTATAACATAATGAGCCAAGTATAACAAAAGTATCAAACCTA TGCAGGGGAGAAGATGATGAAAAGAAGAGTGTGAGCCAATACAAAGCAGATTTGA GGACATGGCTTACAAGTCTTGGGTACAGAGTTTGGGGAGTGATGGGTGCACAATGG AACAGCTTCTCTGGTTGTCCAGTTCCCAAGAGAACCTTCAAGCTCCCTAACTCCATC TACTATGTCGCCTGATTAAATCTTATTTACTAACAAAACAATAAGATCAGAGTTTCA TTCTGATTCTTGAGTCTTTTTTTTCTCTCTCCCTCTTTTCATTTCTGGTTTATATAACC AATTCAAATGCTTATGATCCATGCATGAACCATGATCATCTTTGTGTTTTTTTTTCCT TCTGTATTACCATTTTGGGCCTTTGTGAAATTGATTTTGGGCTTTTGTTATATAATCT	

			CCTCTTTCTCTTTCTCTACCTGATTGGATTCAAGAACATAGCCAGATTTGGTAAAGTT TATAAGATACAAAATATTAAGTAAGACTAAAGTAGAAATACATAATAACTTGAAAG CTACTCTAAGTTATACAAATTCTAAAGAACTCAAAAGAATAACAAACAGTAGAAGT TGGAAGCTCAAGCAATTAAATTATATAAAAACACTAACTACACTGAGCTGTCTCCTT CTTCCACCAAATCTTGTTGCTGTCTCTTGAAGCTTTCTTATGACACAAACCTTAGACC CAATTTCACTCACAGTTTGGTACAACCTCAGTTTTCTTCACAACAAATTCAAACATC TTACCCTTATATTACCTCTTTATCTCTTCAATCATCAAAACACATAGTCACATACATT TCTCTACCCCACCTTCTGCTCTGCTTCCGAGAGCTCAGTGTACCTCGCC
P_CYP86B1	*Arabidopsis*	2163 bp	Naseer, S., et al., (2012). Proc Natl Acad Sci USA 109:10101-10106. GGAGCTAAACACAACAAGTTTTCATGAGCACAAATAGTGGATGTATATACAAGAAT TAATAACTTAGAAGGAAAAAAACTAGAGCTAAACTAAAGACTATCGTGTGTGATGG TTCACAAATCCATATTAGAAATCAGACTTTGATTCTTCTGAGACAAAAAAAACCAA CCTTGTATACATAAAGAGTTTGTTAACGTCTGCTTCAAACTGCAGTTGCCTTGGGTT CTTAGCAAATGTGGTACTCTTGGCAAGAACTCCAACAGCCTGCAAATGCAAAGTTT ATCAAATGAGCAACTTCATTAGAAATTTATCAATAAAAAACGAAACTTTACGATTC CCCTTCAGCCTAATTTCAATTCTTCTAATCTTAATTCTATTGGTGCAAATCGAAAAG ACTAAATCCGAACAAAAAATTCAAACTTTCTTCACACCCAGTAAGAGATCAAACAC AGAAGCAAGAGATTCATTAACCTGCTGAAATTTGTTGAAAAGAGTCGCCATTTTTA GTTTTCTTTCCTCTGAAACGATTCTCCACGCTCTTTGTTTATAAGGATTGCAAGAAAT TACTGAAGAACATCAGGAATCGCGAGAGCTTGGGGCGAATCAAAAACCTCCATTGA TGAAGAAGACTGCATCTAGTACTTTACTTACTCGGTAGCACACCTCCATGGGCAGGC TCCAGCACCATGGTTGGGCCCATTTCTTATTAATGGGCCTAAAATAGAGCTTCTAGG GCCTCTATATATTTTGTCTTTTCTCTTCCGTTTAGGCGTTTTGCTAACTTTCTTACGTA TATGAATGTGAATTATAGTTAGTTAACTTTAGAACTGTTGAGCGGCCAATGCCACGT CCTTTGTACGTAAATTATGTTATTCATGCTATTATTTATGTACCAATTTTCTATTCTA ATATATATTCTAAGTTTTTTTTGTATCAATACTAAGTATTTATACAATTTTTGCAAAT TTTGACAGAAAGATAGTACAAAAAATATGAAAGACCAAAAACTACATAAACCACC AAAAATTACAACACAAACAGAAAACGGAAAGAAAACTCAATCGAAAACTCTACAA GTAGAGACCTTAAAAGAAACTTAGATTCCAAACCACAAAGCTCAAATATTTGTGTG GTTTCCTCAACTTAAAAGATCTCAAATACTTATAGTTGTTGCCACTAGCAATCCAAA CCTAGGCCAGTTTTCAAAATCTCTAAAAAAGAGCTTACCATTCCAAACTTAGGACA ATCCTCATAATATTTTAAATTTTATGACATTTTTTAGTTTTTTCTTACCGAACATAGA GATACAACGAATAACACAAAATACCAAATTTTACTAAACAAACAATTACTGCACAA ATGAAAAAGTAATCAACAACATGAGCTCATTTCACGAAAAAAGAAGCGAAAAAGC CAACGGTCTTGCCACAAATTAGTATATTGCAAATTACAAATGCTTAAAAAAATTCAC AGATATATTCATCAATTATACCTTTTGATTATCTTGCAAATAAATCTTCCAATTCATA TTACCTACGTCAAAATTTAGCCATCTACCCTTATTATCCCATTATGAAAATTTCAAA ATCGATAAGATGACAGACACCCAACAACGAATTATCATTTTATATACTATAGGTATT AGATACCTACAATTTATTTGGTTTATTGGGAATATACGATTCATAAATTCCCTCATA AAAATATAAAGCAAATGTGGACGGAAGCAAAAAAACTAAATATAGAATGGAGAGA AATTGTATTATTAACTTAGGTTACCCATCGCCAACAACCTCTCATTTCCTTTCCTAAA CTATTTCACAATTTTGGTCAAAAACACAATCTAACCCCAAAAAAGATTCGACCTTTG AAATTCCCAAAACCAGAAGCAAAACCCCCAAAAGAACCCTACTTATAGTGAAAGA

	AAAGTAACATAATAATATATATACACGAGAACCAAGAGCCACTTGAATATAAAGTT CACAGTTTTTGTCTGCTCACCAAATCAAACCAATTTCTCCTGATAGCCAAAGTTTTT GTCCCCAACAAGAAACTCATGCAACATTCTTCACCCACTAGCTAACTAACGACTTCC ATTCTTATTAATCTCTCTCAATTCTTCATTTCTGAGATTCATCGCTCTCTCTTCTCTTT GTCAC		
P_CmRbc	*Chrysanthemum morifolium*	1007 bp	Chung, S.M., et al., (2005). Trends Plant Sci10:357-361.
	CTTAGACAAACACCCCTTGTTATACAAAGAATTTCGCTTTACAAAATCAAATTCGAG AAAATAATATATGCACTAAATAAGATCATTCGGATCTAATCTAACCAATTACGATA CGCTTTGGGTACACTTGATTTTTGTTTCAGTGGTTACATATATCTTGTTTTATATGCT ATCTTTAAGGATCTGCACAAAGATTATTTGTTGATGTTCTTGATGGGGCTCAGAAGA TTTGATATGATACACTCTAATCTTTAGGAGATACCAGCCAGGATTATATTCAGTAAG ACAATCAAATTTTACGTGTTCAAACTCGTTATCTTTTCATTCAAAGGATGAGCCAGA ATCTTTATAGAATGATTGCAATCGAGAATATGTTCGGCCGATATGCCTTTGTTGGCT TCAATATTCTACATATCACACAAGAATCGACCGTATTGTACCCTCTTTCCATAAAGG AAAACACAATATGCAGATGCTTTTTTCCCACATGCAGTAACATATAGGTATTCAAAA ATGGCTAAAAGAAGTTGGATAACAAATTGACAACTATTTCCATTTCTGTTATATAAA TTTCACAACACACAAAAGCCCGTAATCAAGAGTCTGCCCATGTACGAAATAACTTC TATTATTTGGTATTGGGCCTAAGCCCAGCTCAGAGTACGTGGGGGTACCACATATAG GAAGGTAACAAAATACTGCAAGATAGCCCCATAACGTACCAGCCTCTCCTTACCAC GAAGAGATAAGATATAAGACCCACCCTGCCACGTGTCACATCGTCATGGTGGTTAA TGATAAGGGATTACATCCTTCTATGTTTGTGGACATGATGCATGTAATGTCATGAGC CACAAGATCCAATGGCCACAGGAACGTAAGAATGTAGATAGATTTGATTTTGTCCG TTAGATAGCAAACAACATTATAAAAGGTGTGTATCAATAGGAACTAATTCACTCAT TGGATTCATAGAAGTCCATTCCTCCTAAGTATCTAGAAA		
P_HSP18.2	*Arabidopsis*	915 bp	Takahashi, T., et al., (1989). Mol Gen Genet 219:365-372.
	AAGCTTGCTGCAGCTTTGACGACAAGTAGGTTTGTTCAATTAGTAGCATCTTTACAA TGTAAAGCTTTTCTCTTCATTTCTCTTTCTTTCTTTCTTTCATGCAAGTTCTATTGATT AGAAACCAAAACCATGACATATCACATTTTCAATTTTTAACCCCAAGTTTCCCAAAA AGGTAATCACAATTACTTTCCATGGTCATTTCTTCTGGTTCAAGCATGACATGAACA GGCAATAAATAAGTTGAGATTTTGATCACAGTAACTGATACTTGAATCGAATCATTT AGATTTTTTTTTTTTTTAGTTTACTTGTTTAGTAAATATGTTGTCTATGTTTGTCACAA AAACGTGGCTCAGTTCTTGTATATATGGAGACAAAAAAATCCATTAAAAGATTGTT GACATTCTCGGAAATTTAGTGCCAACTGTTATTGCGAGAACTTACTATAGTTTTCCT TTGGCGAAAAGCTAATAATCTTAAATCTTGATTTTGTCCTCTTTTCTCTGAGTTAGAT TTTCTTAAATTCCACTTCCGACCTATTAAGAAATGGGCTTTTGCAAAGAAGATCCGC TTCACTGAGCCCGTATCTCGAAGAGGATAATACAACAACAAAGCAAAACGGCACGT AGTTTTAATTGTAACCAAGGATTGCATTTCGGTCTTGTTTCAACAAACGAAACTTCC TGAAATGCCAAGAAAAATCTGGTCATTTCACCACAGTGATCATTGTGTATGTGTTCT AAAGACTCCAAGCGAAGGTTTTAGAAAAAGGAGCATTTTCTATTCTATTCAAGAAA CTCGAAGAACATTCTCTCTTCATCCTCTAACTTCCCTATAAATATGTCCTTTGCTAAT CAGATCAAATCAGCAGGAAAATCAAGAACCAAAAGTCTCCCGAAAAGCAACGA		
P_AtRD29A	*Arabidopsis*	1525 bp	Bihmidine, S., et al., (2013). Planta 237:55-64.

	GGAGAGATTTGGGGTTTTGCTTTTGATGTTTGTGTTTTTGTATGATGCCTCTGTTTGTG AACTTTGATGTATTTTATCTTTGTGTGAAAAAGAGATTGGGTTAATAAAATATTTGCTT TTTTGGATAAGAAACTCTTTTAGCGGCCCATTAATAAAGGTTACAAATGCAAAATCAT GTTAGCGTCAGATATTTAATTATTCGAAGATGATTGTGATAGATTTAAAATTATCCTA GTCAAAAAGAAAGAGTAGGTTGAGCAGAAACAGTGACATCTGTTGTTTGTACCATAC AAATTAGTTTAGATTATTGGTTAACATGTTAAATGGCTATGCATGTGACATTTAGACC TTATCGGAATTAATTTGTAGAATTATTAATTAAGATGTTGATTAGTTCAAACAAAAAT TTTATATTAAAAAATGTAAACGAATATTTTGTATGTTCAGTGAAAGTAAAACAAATTA AATTAACAAGAAACTTATAGAAGAAAATTTTTACTATTTAAGAGAAAGAAAAAAATC TATCATTTAATCTGAGTCCTAAAAACTGTTATACTTAACAGTTAACGCATGATTTGAT GGAGGAGCCATAGATGCAATTCAATCAAACTGAAATTTCTGCAAGAATCTCAAACAC GGAGATCTCAAAGTTTGAAAGAAAATTTATTTCTTCGACTCAAAACAAACTTACGAA ATTTAGGTAGAACTTATATACATTATATTGTAATTTTTTGTAACAAAATGTTTTTATTA TTATTATAGAATTTTACTGGTTAAATTAAAAATGAATAGAAAAGGTGAATTAAGAGG AGAGAGGAGGTAAACATTTTCTTCTATTTTTTCATATTTTCAGGATAAATTATTGTAAA AGTTTACAAGATTTCCATTTGACTAGTGTAAATGAGGAATATTCTCTAGTAAGATCAT TATTTCATCTACTTCTTTTATCTTCTACCAGTAGAGGAATAAACAATATTTAGCTCCTT TGTAAATACAAATTAATTTTCGTTCTTGACATCATTCAATTTTAATTTTACGTATAAAA TAAAAGATCATACCTATTAGAACGATTAAGGAGAAATACAATTCGAATGAGAAGGAT GTGCCGTTTGTTATAATAAACAGCCACACGACGTAAACGTAAAATGACCACATGATG GGCCAATAGACATGGACCGACTACTAATAATAGTAAGTTACATTTTAGGATGGAATA AATATCATACCGACATCAGTTTGAAAGAAAAGGGAAAAAAAGAAAAAATAAATAAA AGATATACTACCGACATGAGTTCCAAAAAGCAAAAAAAAAGATCAAGCCGACACAG ACACGCGTAGAGAGCAAAATGACTTTGACGTCACACCACGAAAACAGACGCTTCATA CGTGTCCCTTTATCTCTCTCAGTCTCTCTATAAACTTAGTGAGACCCTCCTCTGTTTTA CTCACAAATATGCAAACTAGAAAACAATCATCAGGAATAAAGGGTTTGATTACTTCT ATTGGAAAGAAAAAAATCTTTGGA	
P_AtRD29B	*Arabidopsis*	649 bp	Bihmidine, S., et al., (2013). Planta 237:55-64. GCGTAATTTTCTAGATCCGTCTTGGGAGCTCAGACTGTATCAGTGATGATGATGATGA TGAAGAAGAGAACGAATTTTGAAATTGGCGGTTTTGAATTTTTAAGAAATTAAAAAA TATCCCCCGTCGATTTCAAGAGGGAGATGGAGATACCAAAGCAACTCTCGCCACTTGT CGTCTTTTAATTTTAATTGAGTACGTTATGCCGTTTTAAATGTTCAAAACAGCACACA GTTGATAGCTGAATTGATTTTTTCTTTTGCCGTTTTGTTATATTTAAACAACACACAGT GCATTTGCCAAATAACTACATGATGGGCCAATAAACGTGGACCGACTAAAACTAAAT AATAGAAGATACATCGATAGGCTTCTCTAAAGATCGGATAAAAGATAATGTCGCATA GCCACGTAGAGAGCAACTGGCTGAGACGTGGCAGGACGAAACGGACGCATCGTACG TGTCAGAATCCTACAGAAGTAAAGAGACAGAAGCCAGAGAGAGGTGGTTCGGCCAT ATGTCATCGTTCTCTCTATAAACTTTATGGAACTTTGTTCTGATTTTCTCAGAGACACG AAAAGAAAGAAAACAACACTAGAACAAAGAGGGTTTGATTGATTCACTTGAAAAAG AGAAAACACAGCTTTGGA
P_MpUbiC-4	*Marchantia polymorpha*	2500 bp	GTATGAATCATTGTAGAGACTTGATTCCAGTGGACCTACTATACCTAACAAACGAAA AAAACAGAACTCAGTCCAATGGAGCTCATGAAACCCTTGCAAACTCTCTTTAGTGAA

		AGTTTGAAACTTTGAAAATCACCAACAAACTATCCACAAATTTCTTGGAACTTTGGAG ATCACAATTTTGATAATTGCAACAAGCTTTCCAATGATCAAAACGACAACAAGAAAG AAAGACAAAATAAAAGTGAGACTTGAGCTTTAGTTTATCAATTTATTTTGAAATGCAT CTTGTCACGATAATCATTAGTAGGTTATTGGGAAACACTTAAGCCTCAAAAGTACTCT CATAGTAGTACTTCGTCCAAATAGGGGCAATCACTTTCTACACATTATAGCCGTCAAC TATCGAGATACAAAAACTCGTTTTGGAACATGGTTGACGTAGGAGTTTTGGAGGGTC TTCTCGTTTGAAAAAACTTCATGTTGGGTCCTAGCAAGTGTTTTGAATTCATTGTGTCT TATCAATTTGTCTATTCGTTTGTATCTCTATTAACTATGTATGAAAATGAAACTAATCT AGATTCAATTGATGCTCATTTGATTGAATGCTCATCGAAGGAAGAGAAGATATCTAT ATATTATACCACCAGAAATATGATCGTGATGATGGCGAGTGAGAGTGTATTCCTCATT CTGAGTTAGTGCTAATATACATTTTAGTTTTATCACGTTAAACACATATATTCTTGTTA CAAGAGGCCCAAGTTATTGTTGCAAACAGGGTGATTATTGTAACTATATATAACAGA TATAACGGAGATTGCTACGGTAGAAACCAATGTCTCAAAGTTTAAATATATGGTGAG AGTTAATCTCCTTGGTTTTTTTCTCTAAAGATATAGAATTTTATGAATGCAAGATTTTA CCACATTTTATTAATCTTTTTAAACAACATGTTTCCATTTTTTTACACATAACACTAGC GAAATACCGTAGAGATCAGGTTAGATCATGAAACATCACATGATCTATTTGTTTATAG ATTTTATATCTTGATCATGTGGATCTTTTAGCATGTCTTTCTCATTACTTCTACCTACA GGTAAATATCATATTTGTACTACTTGATGGGATTTTTCAATATTCCCTTGCCCCATTCA AAAATAACATCAATCATCATGCCTGTATACATACACATTCTTCTTGCCCCTCGCATGC TTGCACGATGTTTGCCACCCACAGCATTGCGAAATATAGAATGTTGCTGTGAGATAA GTATTTGCATATGCAACATTCCATTGCCAAGGAGTCACGTATTCCAGCACAGGCCTTG TGGGAAAAAAGCCGGACATGGACGCTGCACTCCACATGTGATCAATATTCACTTATA GAAATTATGCATTCGTTTCCTATATCCGAGAGAAGAGTGCAGAAACGTACCAGCCCG TGCAATCTGCCAAGCCCGACGAGTTGCATGTAGAATGCACTGAGTGTCGTAAAACCA CTGTAATGATTTGTTAGTACCATGTGTTCATTCCCCAGAGTACCAACGTGTTCAATAC GAAGTTGAAATGACATTCTGCCATATAAAGTCACCATCGTAAAATATAAGGAACCAT AATGAAGGTACTAAATTACACTTTTCAAGAGTACGTACGAGCGCTTTTGAAATGTTTG CTGTGCGTCTGCCAATCATTCGTATGGAGAGATGAGGGTCCTCTGGGTCCTCTTACTT ACCATTTGATTCGTTCTAGATTAGGCCTCATTCTCGTGAACGAAATAATAACAACCGC GCGTATCGATTGGGTGGTGGGGTGTACTCGTGCTCAGCCACTGGAGGTCAGTGGGCG TGCTCATCATGACCCGGAGAAAGACGAAATTCGAGCGTTCATGAAGACATTCATGCA CACAAGGAAGGACCTCGCAGAAATATCTGGACGAGGAGCTGAGCCCACAGGAATTT CAGGCAGATTTCCAGGAAGGTGAAGGCCGACCCGCTTTCGAAGGAAGGAAGGAAGG AAGGAAGGAAGAATGACTAGATTGTTCCAAGTGAACAGAGCGCGAGATGCATCATG ATTCTCAGGCTGAGGAGAATAGGACAGAGTAATAGTAAAAAAATAGGCTGCCAGTG GTAAATGATCGCTCGTCTGTCTGGCCATCTCTGCCTGTCGTGCTGTACCGTCGTCGTC ATTCATCGAGCAGCGAAGACTTGGAGAACAAGTTGAAGTCATGATTGACCCTACCCG GGCGGTCACAAACGACGGGGTCCTTTGTTGTATAAGTACACGGGGCTGGGAATTGTA GTTCAGCGGTTTCTGATTGTTGGTTATCATCGACACTGCTTCTTCCAGCAGTACTTCTA CTACATAGAAATTTACGTCTAATAGTTTCGTTAATTTTGTTTCGTGGAGCAGGCAGAG TACTGTCGATTCCATTTCGTTCGTGGATTGATTGATTGTCGTCCTAGTTGGAAAGGAA GTGAGTGAGAAGAAGAAGGATC
P_MpUbiC-2	*Marchantia polymorpha*	2494 bp

TCGCTGTCCAGAGACACTTTTACAATTACATCCCTTAACATATTTTGGTTGAAACCTGT
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CGTCGGGAGAAG

P_MpUbiC-3	*Marchantia polymorpha*	1500 bp
	ATAGAGTTGATCGAGAGATTCATGCCCGTTTTGAAACAGTGAGTAAGATATTAAGAA TTATAATTTGTTATCTACTTGTTGCCACGTTGGTGACACGCTGTACCAGTACAGGTGCC GGTTGAATACTATTTTAGCATGGGACGTACTTTTGACAGACCGTCGCTTGATTTTGGT CCACATTCAATCAACTACATCTGAGTTTGCTTCATTAGCAGTGGCCGGTAGCGCCACC GGCCACCAATTTCAATGTTTCAACTAAGTCTCGTTCGGGGTTTTCTAAATTATCTAGA GTTTCGAGCTAAATCTACAGCGGGAATAAGTCACGACAGTTTAGAATAAGAGTCACT ACAATTAGTAGAGCGTTTAGGGTCTAGATTACTTGTATTTGAGCTACAATATTGTTTTT TTGGCGTCATTGTCTGCATCAAACGTGACACTCAGAGACGTGGATGAGGTTGTATCAT TTTTCCCTTTGTTGTAAGTTTATAAGTTGTTTTTTCGCGGGCATATGTTGCATCAGCCC GCTTAGAGTCAGATGATGATTAGATCCCAAATATATTATGTGAAATAAATTGATCCAA AAAAGTGTTTGTAAACCTACATCTTAGAAAAAAAAATTATACATGTTTTGTCATCCAA CTAATAGATCCACTTTTTCACCAATTATAAGGAAAAAGGCGCAAGTAAAATTATCCAT TTCAAGATGCAAAGCAAATAAACCGTTCACTTCCGCTTCTGCACATATACCATAACAT GACTTGCTAGTGGGCTTGGCGTGAAGCAAATACTTGCTACTATAGTCGGGCTTAGGAA CAGCAGAGTATGAATCTGGAATAAACCCACGGGGGAGCCCTAAAACCTTTGATTTAG AGAACTTAGGAAGTTCCCAGCTGTAGACTTGCGTAGTGCGACTTCTGGCCATGCCTAC TGTAACCTCCTTGTACCGTTCACGTTCGACCATTTCTCATGATCAAAGAGTGGATCAC ATGAAAAAAATGAGCAAATGATAATACATAATATTGTATCGCTGGTTTATTAAGGAG AGTCAACTACTGTGCGCTGGAGCGGAGCATCATACGGCGGAGTCGTAGGCAGTTACT GAACCGGAGCTCGTGGTGACGCTCTTCGTGGTTACTTGAGAAGTTTAACCCATCGTCA TCCGGTTGCAGTAACTCACAAGTGGTCTGTCGGCAGCGGTGACTCACGGCAAGGTCC AGGCGGGAGTCATGATTATCTGCATGTGGTGACGGCATGAGCTGTCAGCAGCTCGAG GACCCGAAGAGCTATAAAGAACACCCGCTGGTCCTCATCTCCTCATCTCCTCATTCTG GTCTGCTTCTTCTTTACCTCACAGCTTCATCTTTCTTTGCTCGTTAAAAGTCTATCTTTC ACGTTCCTTTCTTCATTCGTTTCTACACTTTCTTCTTCGTCCGTTTGTTATTCTGTAGTG TTCAGGAGGTGCACAACAATTCCACTTGGGGCCCGGTGCGCTCCGCCAAG	
P_MpEFla-5′UTR	*Marchantia polymorpha*	1729 bp
	CAAATGAGTCACACACATTGTTGAGAGACATATCAAAATAACTCAATTGTAAGGTAA GTTGATAGATTTCCCAGTTAAATGCATTATTTTAACAATATTTGTATCTCAAATTTTCA AAATCATATCAAATTTGCAGATCTTGATGATGATTCACAACTCTGTCTTCGATTTTTGA TTGTTAACGGGTATCGATATTTGGGTAACTTAAAAAGAATTTGCTAAAGATCTTAAAA AACAGATTAAAAAAACCTTTCAAAATAGCTAATCCTTTAAATCCGTTTCACAATATAA TGCTCATTGATGATAATCGAAAAGATTCCATTTTAAAGTGCATATAAATTGCTTAATT ATCTCTTTCTGTCTCGTAATATTTTGTTCTCTCCTATTGGATCGGACCCGCATCTTCTCG ATCAGTTCACTATACTAATATTTGGTCAACTTCAAGAGAGATTAGAACTTCGTTCTCC AAAGTGTAAAGGCCGACAAGCAGAAAAGGAAACTTCAATCAGAAGCCTTCTAGGTTT TCCCGCGTCCCAAAAAGCGAAGGGAGGACGGGGAGGACGGTGAGGCCAGAAGAAGA AAGCAACAGTAAAATCTCATGTGATTGCGTGCATGTCATGGATCTATGGGATGCTAGT CCACCGTTTGGAAGTATGTGCAGAAGGAGAAAGGCGCGGGAGGCCAAAAGCGACTT CGGCCACCTCTCTACTTTCTAGAAAGTTTGCTCGCAGCTTGTAATAAGCGCGGAAAAG GTACTCGAAAAACCGGAGCAATCGGTGTGGTATCAGCAGTCGGGTTCGCTAAACCTA	

	CGTCTTCTTATTTTGGAATGTTAAATTGAAAGGGCGTGCCGGCCCTAAGCACGGACGA TGTGACAGACGGAGGAGTGTGAGCAATTCGGATGACGATGCTGGCCGGCAGTCACGA CAAAGAGTCCGAAGGGGCATGGACAGGGCAATATATAAATGGAAAAGAGGCTTTGA ATATTCCTAACCCTTCGTCGTCGGCCTCCCAACTTGCCCTCGCATGCTGAATTGGCCGC CTATCTGCGAATGGCCGGCCGCCGACCCTAAGTCGCAATAACTTGAACGGAGCCGAT GCAAAGTCCTTATCGAACGCTCGTTATTATAAACGGGGCAGACCTAGGTATTTAATTA TATCAAAACCCTCCGCAATTTCGCTAATCATTCCCTAATTTCTTCTACTTTGGCGTCTA GTGCTGTGGTCGCGCTTGCTCTCAAAGCTCGCTGGGAGGCAGTGGAGCGTCTGGCTTA AAATCGATCGCCGCAACCCTAGAGTTCCTTTCACTTCTTTCTCTCTTGCGTGGAGAGC ATCGACATCGAAGAGCTGCATCTTGTCTTCTGGTATGCGCCTTGTGCCCTCGTCTCTGT ACGTCGTTACGATTGCTCGATATTGTGATTGTCTAGACCTGAAACCCGACTGGAGCTT TTACGTGGTGTCGATTGGGGCCTCGAGCGAGTGATTTTTTAGGTTCGTTTTAGCCAAG TACATCCCACTTTGGTCAGTCCTGTTATCTCGGTAAGGTGTTCAGTTCAGTCTCTGGTG CGGAGGTGCCTCGTAAGTTTCCTGCATGATAGATTTGTCTATCCTTGACTTGAAGAGG AGTCGAAGGTCAGCGAGGTTGGCTGTGTGCTATGGACGTCGGTGCTCCTTGGTTCCGT GCTTCTATGGGTGTTGCCTCAACAGTATTGATGTGCCTGCAGAAAGGTTG	
P_StGBSS	*Solanum tuberosum*	857 bp	Ni, M., et al, (1995). Plant J 7:661-676.
	AAGCTTTAACGAGATAGAAAATTATATTACTCCGTTTTGTTCATTACTTAACAAATGC AACAGTATCTTGTACCAAATCCTTTCTCTCTTTTCAAACTTTTCTATTTGGCTGTTGAC AGAGTAATCAGGATACAAACCACAAGTATTTAATTGACTCATCCACCAGATATTATG ATTTATGAATCCTCGAAAAGCCTATCCATTAAGTTCTCATCTATGGATATACTTGACA GTTTCTTCCTATTTGGGTATTTTTTTTTCCTGCCAAGTGGAACGGAGACATGTTATGTT GTATACGGGAAGCTCGTTAAAAAAAAAAAAATACAATAGGAAGAAATGTAACAAACA TTGAATGTTGTTTTTAACCATCCTTCCTTTTAGCAGTGTATCAATTTTGTAATAGAACC ATGCATCTCAATCTTAATACTAAAAAATGCAACAAAATTCTAGTGGAGGGACCAGTA CCAGTACATTAGATATTATTTTTTATTACTATAATAATATTTTAATTAACACGAGACAT AGGAATGTCAAGTGGTAGCGGTAGGAGGGAGTTGGTTTAGTTTTTTAGATACTAGGA GACAGAACCGGAGGGGCCCATTGCAAGGCCCAAGTTGAAGTCCAGCCGTGAATCAAC AAAGAGAGGGCCCATAATACTGTCGATGAGCATTTCCCTATAATACAGTGTCCACAG TTGCCTTCCGCTAAGGGATAGCCACCCGCTATTCTCTTGACACGTGTCACTGAAACCT GCTACAAATAAGGCAGGCACCTCCTCATTCTCACACTCACTCACTCACACAGCTCAAC AAGTGGTAACTTTTACTCATCTCCTCCAATTATTTCTGATTTCATGCA		
P_StUbi	*Solanum tuberosum*	1197 bp	Ni, M., et al., (1995). Plant J 7:661-676.
	GGAGGGAATCTAATACTTACCTCTTAGAAATAAGAAAAAGTGTTTCTAATAGACCCTC AATTTACATTAAATATTTTCAATCAAATTTAAATAACAAATATCAATATGAGGTCAAT AACAATATCAAAATAATATGAAAAAAGAGCAATACATAATATAAGAAAGAAGATTT AAGTGCGATTATCAAGGTAGTATTATATCCTAATTTGCTAATATTTAAACTCTTATATT TAAGGTCATGTTCATGATAAACTTGAAATGCGCTATATTAGAGCATATATTAAAATAA AAAAATACCTAAAATAAAATTAAGTTATTTTTAGTATATATTTTTTTACATGACCTAC ATTTTTCTGGGTTTTTCTAAAGGAGCGTGTAAGTGTCGACCTCATTCTCCTAATTTTCC CCACCACATAAAAATTAAAAAGGAAAGGTAGCTTTTGCGTGTTGTTTTGGTACACTAC ACCTCATTATTACACGTGTCCTCATATAATTGGTTAACCCTATGAGGCGGTTTCGTCTA		

GAGTCGGCCATGCCATCTATAAAATGAAGCTTTCTGCACCTCATTTTTTTCATCTTCTA
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GTTCTGATTGTTGTTTTTATGAATTTGCAG

P_StPat | *Solanum tuberosum* | 1737 bp | Ni, M., et al., (1995). Plant J 7:661-676.

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P_ZmUBQ1	*Zea mays*	1814 bp	

GGAGGTAATGAGCATTGCATGTCTAAGTTATAAAAAATTACCACATATTTTTTTTGTC
ACACTTGTTTGAAGTGCAGTTTATCTATCTTTATACATATATTTAAACTTTACTCTACG
AATAATATAATCTATAGTACTACAATAATATCAGTGTTTTAGAGAATCATATAAATGA
ACAGTTAGACATGGTCTAAAGGACAATTGAGTATTTTGACAACAGGACTCTACAGTTT
TATCTTTTTAGTGTGCATGTGTTCTCCTTTTTTTTTGCAAATAGCTTCACCTATATAATA
CTTCATCCATTTTATTAGTACATCCATTTAGGGTTTAGGGTTAATGGTTTTTATAGACT
AATTTTTTTAGTACATCTATTTTATTCTATTTTAGCCTCTAAATTAAGAAAACTAAAAC
TCTATTTTAGTTTTTTTATTTAATAATTTAGATATAAAATAGAATAAAATAAAGTGACT
AAAAATTAAACAAATACCCTTTAAGAAATTAAAAAAACTAAGGAAACATTTTTCTTG
TTTCGAGTAGATAATGCCAGCCTGTTAAACGCCGTCGACGAGTCTAACGGACACCAA
CCAGCGAACCAGCAGCGTCGCGTCGGGCCAAGCGAAGCAGACGGCACGGCATCTCTG
TCGCTGCCTCTGGACCCCTCTCGAGAGTTCCGCTCCACCGTTGGACTTGCTCCGCTGTC
GGCATCCAGAAATTGCGTGGCGGAGCGGCAGACGTGAGCCGGCACGGCAGGCGGCC
TCCTCCTCCTCTCACGGCACCGGCAGCTACGGGGGATTCCTTTCCCACCGCTCCTTCGC
TTTCCCTTCCTCGCCCGCCGTAATAAATAGACACCCCCTCCACACCCTCTTTCCCCAAC
CTCGTGTTGTTCGGAGCGCACACACACACAACCAGATCTCCCCCAAATCCACCCGTCG
GCACCTCCGCTTCAAGGTACGCCGCTCGTCCTCCCCCCCCCCCCCCTCTCTACCTTCTCT
AGATCGGCGTTCCGGTCCATGGTTAGGGCCCGGTAGTTCTACTTCTGTTCATGTTTGTG
TTAGATCCGTGTTTGTGTTAGATCCGTGCTGCTAGCGTTCGTACACGGATGCGACCTG
TACGTCAGACACGTTCTGATTGCTAACTTGCCAGTGTTTCTCTTTGGGGAATCCTGGG
ATGGCTCTAGCCGTTCCGCAGACGGGATCGATTTCATGATTTTTTTTGTTTCGTTGCAT
AGGGTTTGGTTTGCCCTTTTCCTTTATTTCAATATATGCCGTGCACTTGTTTGTCGGGT
CATCTTTTCATGCTTTTTTTTGTCTTGGTTGTGATGATGTGGTCTGGTTGGGCGGTCGTT
CTAGATCGGAGTAGAATTCTGTTTCAAACTACCTGGTGGATTTATTAATTTTGGATCT
GTATGTGTGTGCCATACATATTCATAGTTACGAATTGAAGATGATGGATGGAAATATC
GATCTAGGATAGGTATACATGTTGATGCGGGTTTTACTGATGCATATACAGAGATGCT
TTTTGTTCGCTTGGTTGTGATGATGTGGTGTGGTTGGGCGGTCGTTCATTCGTTCTAGA
TCGGAGTAGAATACTGTTTCAAACTACCTGGTGTATTTATTAATTTTGGAACTGTATGT
GTGTGTCATACATCTTCATAGTTACGAGTTTAAGATGGATGGAAATATCGATCTAGGA
TAGGTATACATGTTGATGTGGGTTTTACTGATGCATATACATGATGGCATATGCAGCA
TCTATTCATATGCTCTAACCTTGAGTACCTATCTATTATAATAAACAAGTATGTTTTAT
AATTATTT

P_OsUbi	*rice*	1484 bp	Ma, X., et al. (2015). Mol Plant 8:1274-1284.

AGCCCCATTCACCACATTTGCTAGATAGTCGAAAAGCACCATCAATATTGAGCTTCAG
GTATTTTTGGTTGTGTTGTGGTTGGATTGATTCTAATATATACCAAATCAATATAATTC
ACTACCAAAATATACCATAGCCATCACAACTTTATTAATTTTGGTAGCTTAAGATGGT
ATATATAATAACCAATTAACAACTGATTCTAATTTTACTACGGCCCAGTATCTACCAA
TACAAAACAACGAGTATGTTTTCTTCCGTCGTAATCGTACACAGTACAAAAAAACCTG
GCCAGCCTTTCTTGGGCTGGGGCTCTCTTTCGAAAGGTCACAAAACGTACACGGCAGT
AACGCCGCTTCGCTGCGTGTTAACGGCCACCAACCCCGCCGTGAGCAAACGGCATCA
GCTTTCCACCTCCTCGATATCTCCGCGGCGCCGTCTGGACCCGCCCCCTTTCCGTTCCT
TTCTTTCCTTCTCGCGTTTGCGTGGTGGGGACGGACTCCCCAAACCGCCTCTCCCTCTC
TTTATTTGTCTATATTCTCACTGGGCCCCACCCACCGCACCCCTGGGCCCACTCACGA

GTCCCCCCCTCCCCACCTATAAATACCCCACCCCCTCCTCGCCTCTTCCTCCATCAATC
GAATCCCCAAAATCGCAGAGAAAAAAAAAATCTCCCCTCGAAGCGAAGCGTCGAATCG
CCTTCTCAAGGTATGCGATTTTCTGATCCTCTCCGTTCCTCGCGTTTGATTTGATTTCCC
GGCCTGTTCGTGATTGTGAGATGTTGTGGTTAGTCTCCGTTTTGCGATCTGTGGTAGAT
TTGAACAGGGTTAGATGGGGTTCGCGTGGTATGCTGGATCTGTGATTATGAGCGATGC
TGTTCGTGGTCCAAGTATTGATTGGTTCGGATCTAGAAGTAGAACTGTGCTAGGGTTG
TGATTTGTTCCGATCTGTTCAATCAGTAGGATTTAGTCTCTGTTTTTCTCGTTGATCCA
AGTAGCAGCTTCAGGTATATTTTGCTTAGGTTGTTTTTGATTCAGTCCCTCTAGTTGCA
TAGATTCTACTCTGTTCATGTTTAATCTAAGGGCTGCGTCTTGTTGATTAGTGATTACA
TAGCATAGCTTTCAGGATATTTTACTTGCTTATGCCTATCTTATCAACTGTTGCACCTG
TAAATTCTAGCCTATGTTAATTAACCTGCCTTATGTGCTCTCGGGATAGTGCTAGTAGT
TATTGAATCAGTTTGCCGATGGAATTCTAGTAGTTCATAGACCTGCAGATTATTTTTGT
GAACTCGAGCACGGTGCGTCTCTCTATTTTGTTAGGTCACTGTTGGTGTTGATAGGTA
CACTGATGTTATTGTGGTTTAGATCGTGTATCTAACATATTGGAATAATTTGATTGACT
GATTTCTGCTGTACTTGCTTGGTATTGTTATAATTTCATGTTCATAGTTGCTGACCATG
CTTCGGTAATTGTGTGTGCAG

Supplementary Table 2. Detailed information on the terminators used in this study

Terminator	Length	Reference
T_AtUbq10	636 bp	
	ATCTCGTCTCTGTTATGCTTAAGAAGTTCAATGTTTCGTTTCATGTAAAACTTTGGT	
	GGTTTGTGTTTTGGGGCCTTGTATAATCCCTGATGAATAAGTGTTCTACTATGTTTC	
	CGTTCCTGTTATCTCTTTCTTTCTAATGACAAGTCGAACTTCTTCTTTATCATCGCT	
	TCGTTTTTATTATCTGTGCTTCTTTTGTTTAATACGCCTGCAAAGTGACTCGACTCT	
	GTTTAGTGCAGTTCTGCGAAACTTGTAAATAGTCCAATTGTTGGCCTCTAGTAATA	
	GATGTAGCGAAAGTGTTGAGCTGTTGGGTTCTAAGGATGGCTTGAACATGTTAAT	
	CTTTTAGGTTCTGAGTATGATGAACATTCGTTGTTGCTAAGAAATGCCTGTAATGT	
	CCCACAAATGTAGAAAATGGTTCGTACCTTTGTCCAAGCATTGATATGTCTGATGA	
	GAGGAAACTGCAAGATACTGAGCTTGGTTTAACGAAGGAGAGGCAGTTTCTTCCT	
	TCCAAAGCATTTCATTTGACAATGCCTTGATCATCTTAAGTAGAGTTTCTGTTGTG	
	GAAAGTTTGAAACTTTGAAGAAACGACTCTCAAGTAAATTGATGATCACAAGTGA	
	AAGTGTATGTTACATAAGT	
T_AtHsp70	607 bp	Sung, D.Y., et al.,. (2001). Plant Physiol 126:789-800.
	GCCTTTTGGCTTTTGTTTACTCTGTTTGCTTGAGATTCTAGTTGGTTTCTTGTTCTTA	
	GTTTTATCTTTCTATGTCACTCTGAAACTGGTGTGTGATCATTTTGATGCTTTAAGA	
	ATTTAGCTTTACCGTTTTTAAAACTCGCTCTGACCTATGAAAGACGACTGGGCATA	
	ATACTCTACACGAAATATAGTAGACAAAGTGAAAGAAGTTAAGTTCATGGTTTAA	
	GGAATATGATCTTAGCACTTTGATTTTATAATTAACCATCCAATATGAATCCAAGA	
	TCTCTTGTTATACATATTAAAGAAAATTTTCTTCTTATTTCAATATAGTTTATCTGA	
	AAAACCGTACAAATTGTAGTGGGATTCCATATTCTATATATGAGATGTAAGATTTC	
	ATTTGTTGTTGTCCAAAAAAAAAAAATGATTTCATTTGTTAAAGAGTCTTCCATTGA	
	ATGTTGTCACATATTGCGTAACACAAATTCAAGCATATGAACAAATAAGGAATTA	
	AGAGGTTAAAAGAACACAATGAAATGGAGTAAATATGATTAAATATGAATAATC	
	CAATGATACATGAACAATAAAATTCTTTTAAGAAGTTATGCGC	
T_AtHsp18.2	238 bp	Farhi, M., et al. (2011). Nat Biotechnol 29:1072-1074
	ATATGAAGATGAAGATGAAATATTTGGTGTGTCAAATAAAAAGCTTGTGTGCTTA	
	AGTTTGTGTTTTTTTCTTGGCTTGTTGTGTTATGAATTTGTGGCTTTTTCTAATATTA	
	AATGAATGTAAGATCTCATTATAATGAATAAACAAATGTTTCTATAATCCATTGTG	
	AATGTTTTGTTGGATCTCTTCTGCAGCATATAACTACTGTATGTGCTATGGTATGG	
	ACTATGGAA	
T_AtAct2	662 bp	Sarrion-Perdigones, A., et al., (2013). Plant Physiol 162:1618-1631.
	GCTCTCAAGATCAAAGGCTTAAAAAGCTGGGGTTTTATGAATGGGATCAAAGTTT	
	CTTTTTTTCTTTTATATTTGCTTCTCCATTTGTTTGTTTCATTTCCCTTTTTGTTTTCG	
	TTTCTATGATGCACTTGTGTGTGACAAACTCTCTGGGTTTTTACTTACGTCTGCGTT	
	TCAAAAAAAAAAACCGCTTTCGTTTTGCGTTTTAGTCCCATTGTTTTGTAGCTCTG	
	AGTGATCGAATTGATGCCTCTTTATTCCTTTTGTTCCCTATAATTTCTTTCAAAACT	
	CAGAAGAAAAACCTTGAAACTCTTTGCAATGTTAATATAAGTATTGTATAAGATTT	
	TTATTGATTTGGTTATTAGTCTTACTTTTGCTACCTCCATCTTCACTTGGAACTGAT	
	ATTCTGAATAGTTAAAGCGTTACATGTCTTCCATTCACAAATGAACTTAAACTAGC	
	ACAAAGTCAGATATTTTAAGATCGCACCATTTTATATAACCCCAATCGTCAATTCT	
	ACTGTTTCAAGTTTTACACCAAAACAATTACGAGGTGTATCTATTCGTTACTCTTTT	

	CGCTTATTAATCCTTTTACATGATGCAAAATATAACAAATTAATTTCAAATTGTCC TGCACATTTGGTTTATACATCTTGATTCCAAAAAGT	
T_AtG7	298 bp	Butaye, K.M., et al., (2004). Plant J 39:440-449.
	GCTTACTGACTAACTAGGATGAGCTAAGCTAGCTATATCATCAATTTATGTATTAC ACATAATATCGCACTCAGTCTTTCATCTACGGCAATGTACCAGCTGATATAATCAG TTATTGAAATATTTCTGAATTTAAACTTGCATCAATAAATTTATGTTTTTGCTTGGA CTATAATACCTGACTTGTTATTTTATCAATAAATATTTAAACTATATTTCTTTCAAG ATGGGAATTAACATCTACAAATTGCCTTTTCTTATCGACCATGTACCCCGGGTACC AAGCTTCTCGAG	
T_At3g24240	722 bp	Shinohara, H., et al., (2016). Proc Natl Acad Sci USA 113:3897-3902.
	TTTTAAGGTTTGAAGGTTACGTGAGAAGAAAGCTTTTGTGTGTTGTTTGAGAAAAT GGCCTTTTTTTTTCATTTATCATTTTAAGTCTTTATATATGTTATGTATAAAAGAAG AAGAATAGAATGAGAGAAGTGAGTCAGTAATGTTATGGAATTGTGATTAGTAAAG GGTGACATGATATTGTACCTTTTTGGGCGGTTTGAAATCAATAATTTCTCTAGTTTT CTCTCCAAGTGTGACTTTAGATTGAATGTAGTCCTTTATAGTTTTCACTCATAAAC AGTACTATATATATCACCTTCCAGAAACGTATTAATAATAATATTGAATTATTGAT GCATAAAACAATTCTTCAAAAATGATATTTCATGGGGCTCTTGAATCAGTAAGCC ACATAATATTGGACCATGTTTTGGTTTACATGCAACATTATATTGCATACCGTCCG GCCAATTGAGTTGGTCTCTATTTTCTTTCTTCGTGTGGCCAATTTTGGCACAATGAA AAAGCATGCATTTGACCTTTTTCATTTTTTAAACCTTGAGCCTTTCATATATTCTTA ATCTTACTATAATTGTTGATCACCAAATACATTTTTGAGAGCTAGAGCTGGTAAAT ACGTTTAGCTCTATTTCCATTCATTATAATTTGGAAAAATTGGATATTAAGGATCA TTTTTTCAAAAATTTGTCCATCTATACCTTAGTTTGTAAATTGT	
T_nos	257 bp	Farhi, M., et al. (2011). Nat Biotechnol 29:1072-1074
	CGTTCAAACATTTGGCAATAAAGTTTCTTAAGATTGAATCCTGTTGCCGGTCTTGC GATGATTATCATATAATTTCTGTTGAATTACGTTAAGCATGTAATAATTAACATGT AATGCATGACGTTATTTATGAGATGGGTTTTTATGATTAGAGTCCCGCAATTATAC ATTTAATACGCGATAGAAAACAAAATATAGCGCGCAAACTAGGATAAATTATCGC GCGCGGTGTCATCTATGTTACTAGATCGGG	
T_ocs	730 bp	Farhi, M., et al. (2011). Nat Biotechnol 29:1072-1074
	ACTAGTCCCTAGAGTCCTGCTTTAATGAGATATGCGAGACGCCTATGATCGCATG ATATTTGCTTTCAATTCTGTTGTGCACGTTGTAAAAAACCTGAGCATGTGTAGCTC AGATCCTTACCGCCGGTTTCGGTTCATTCTAATGAATATATCACCCGTTACTATCG TATTTTTATGAATAATATTCTCCGTTCAATTTACTGATTGTACCCTACTACTTATAT GTACAATATTAAAATGAAAACAATATATTGTGCTGAATAGGTTTATAGCGACATC TATGATAGAGCGCCACAATAACAAACAATTGCGTTTTATTATTACAAATCCAATTT TAAAAAAAGCGGCAGAACCGGTCAAACCTAAAAGACTGATTACATAAATCTTATT CAAATTTCAAAAGTGCCCCAGGGGCTAGTATCTACGACACACCGAGCGGCGAACT AATAACGCTCACTGAAGGGAACTCCGGTTCCCCGCCGGCGCGCATGGGTGAGATT CCTTGAAGTTGAGTATTGGCCGTCCGCTCTACCGAAAGTTACGGGCACCATTCAAC CCGGTCCAGCACGGCGGCCGGGTAACCGACTTGCTGCCCCGAGAATTATGCAGCA TTTTTTTGGTGTATGTGGGCCCCAAATGAAGTGCAGGTCAAACCTTGACAGTGACG ACAAATCGTTGGGCGGGTCCAGGGCGAATTTTGCGACAACATGTCGAGGCTCAGC AGGA	

T_mas	265 bp	Chung, S.M., et al., (2005). Trends Plant Sci 10:357-361.
	AATCTTGGACTCCCATGTTGGCAAAGGCAACCAAACAAACAATGAATGATCCGCT	
	CCTGCATATGGGGCGGTTTGAGTATTTCAACTGCCATTTGGGCTGAATTGAAGACA	
	TGCTCCTGTCAGAAATTCCGTGATCTTACTCAATATTCAGTAATCTCGGCCAATAT	
	CCTAAATGTGCGTGGCTTTATCTGTCTTTGTATTGTTTCATCAATTCATGTAACGTT	
	TGCTTTTCTTATGAATTTTCAAATAAATTATCAGATC	
T_35S	215 bp	Chung, S.M., et al., (2005). Trends Plant Sci 10:357-361.
	GTCCGCAAAAATCACCAGTCTCTCTCTACAAATCTATCTCTCTCTATTTTTCTCCAG	
	AATAATGTGTGAGTAGTTCCCAGATAAGGGAATTAGGGTTCTTATAGGGTTTCGCT	
	CATGTGTTGAGCATATAAGAAACCCTTAGTATGTATTTGTATTTGTAAAATACTTC	
	TATCAATAAAATTTCTAATTCCTAAAACCAAAATCCAGTGAC	
T_rbc	922 bp	Chung, S.M., et al., (2005). Trends Plant Sci 10:357-361.
	TCATAAGCCCGATGGCTACTAAGTTTTACTATTTACCAAGACTTTTGAATATTAAC	
	CTTCTTGTAACGAGTCGGTTAAATTTGATTGTTTAGGGTTTTGTATTATTTTTTTTT	
	GGTCTTTTAATTCATCACTTTAATTCCCTAATTGTCTGTTCATTTCGTTGTTTGTTTC	
	CGGATCGATAATGAAATGTAAGAGATATCATATATAAATAATAAATTGTCGTTTC	
	ATATTTGCAATCTTTTTTTTACAAACCTTTAATCGTTGTATGTATGACATTTTCTTC	
	TTGTTATATTAGGGGGAAATAATGTTAAATAAAAGTACAAAATAAACTACAGTAC	
	ATCGTACTGAATAAATTACCTAGCCAAAAAGTACACCTTTCCATATACTTCCTACA	
	TGAAGGCATTTTCAACATTTTCAAATAAGGAATGCTACAACCGCATAATAACATC	
	CACAAATTTTTTTATAAAATAACATGTCAGACAGTGATTGAAAGATTTTATTATAG	
	TTTCGTTATCTTCTTTTCTCATTAAGCGAATCACTACCTAACACGTCATTTTGTGAA	
	ATATTTTTTGAATGTTTTTATATAGTTGTAGCATTCCTCTTTTCAAATTAGGGTTTG	
	TTTGAGATAGCATTTCAGCCGGTTCATACAACTTAAAAGCATACTCTAATGCTGGA	
	AAAAAGACTAAAAAATCTTGTAAGTTAGCGCAGAATATTGACCCAAATTATATAC	
	ACACATGACCCCATATAGAGACTAATTACACTTTTAACCACTAATAATTATTACTG	
	TATTATAACATCTACTAATTAAACTTGTGAGTTTTTGCTAGAATTATTATCATATAT	
	ACTAAAAGGCAGGAACGCAAACATTGCCCCGGTACTGTAGCAACTACGGTAGAC	
	GCATTAATTGTCTATAGTGGA	
T_ags	406 bp	Farhi, M., et al., (2011). Nat Biotechnol 29:1072-1074
	GAATTAACAGAGGTGGATGGACAGACCCGTTCTTACACCGGACTGGGCGCGGGAT	
	AGGATATTCAGATTGGGATGGGATTGAGCTTAAAGCCGGCGCTGAGACCATGCTC	
	AAGGTAGGCAATGTCCTCAGCGTCGAGCCCGGCATCTATGTCGAGGGCATTGGTG	
	GAGCGCGCTTCGGGGATACCGTGCTTGTAACTGAGACCGGATATGAGGCCCTCAC	
	TCCGCTTGATCTTGGCAAAGATATTTGACGCATTTATTAGTATGTGTTAATTTTCAT	
	TTGCAGTGCAGTATTTTCTATTCGATCTTTATGTAATTCGTTACAATTAATAAATAT	
	TCAAATCAGATTATTGACTGTCATTTGTATCAAATCGTGTTTAATGGATATTTTTAT	
	TATAATATTGATGAT	
T_3'utr-nos	495 bp	Peyret, H., et al., (2013). Plant Mol Biol 83:51-58.
	TTAACTCTGGTTTCATTAAATTTTCTTTAGTTTGAATTTACTGTTATTCGGTGTGCA	
	TTTCTATGTTTGGTGAGCGGTTTTCTGTGCTCAGAGTGTGTTTATTTTATGTAATTT	
	AATTTCTTTGTGAGCTCCTGTTTAGCAGGTCGTCCCTTCAGCAAGGACACAAAAAG	
	ATTTTAATTTTATTAAAAAAAAAAAAAAAAAAAAGACCGGGAATTCGATATCAAG	
	CTTATCGACCTGCAGATCGTTCAAACATTTGGCAATAAAGTTTCTTAAGATTGAAT	

CCTGTTGCCGGTCTTGCGATGATTATCATATAATTTCTGTTGAATTACGTTAAGCA
TGTAATAATTAACATGTAATGCATGACGTTATTTATGAGATGGGTTTTTATGATTA
GAGTCCCGCAATTATACATTTAATACGCGATAGAAAACAAAATATAGCGCGCAAA
CTAGGATAAATTATCGCGCGCGGTGTCATCTATGTTACTAGATCTCT

Supplementary Table 3. Primers used in this study.

Primer	Sequence (5′→3′)
GG3-BsaI-F	AGTGAATTGTTAATGGAGAGAGACCCCGATGGAAACGTTTAAGCAGG
	TCTCCCGCTCGTAATCATGGTCATA
GG3-BsaI-R	TATGACCATGATTACGAGCGGGAGACCTGCTTAAACGTTTCCATCGGG
	GTCTCTCTCCATTAACAATTCACT
43-BsaI-F	CTTTTAAGAAGTTATGCGCCGCTGGAGAGAGACCCCGATGGAAAC
43-inter-R	CAAGCTGGAAACCTTCCGC
43-inter-F	GCGGAAGGTTTCCAGCTTG
43-BsaI-R	CAGCTATGACCATGATTACGAGCGGGAGACCTGCTTAAACGTTTCCAT
	CGGGGTCTCTCTCCAGCGGCGCATAACTTCTT
GFP208-F	TGCAGTGCTTCAGCCGCTA
GFP494-R	AGTTCACCTTGATGCCGTTC
qP19-F	GACTGAGTGGCGGCTACAT
qP19-R	TCCTCCAGAAACGGTGATAC
Fluc-F-635	ATAGAACTGCCTGCGTGAG
Fluc-R-886	CGAAGAAGGAGAATAGGGTT
REN-F-194	CACATATTGAGCCAGTAGCG
REN-R-476	ATATCAGGCCATTCATCCC
P_CaMV35S_RmBsa-F	GGAATTCGGTCTCAGGAGGGAAACCTCCTCGGATTCC
P_CaMV35S_RmBsa-R	CGGGATCCGGTCTCACATTCCTCTCCAAATGAAATGAAC
P_CsVMV-F	GGAATTCGGTCTCAGGAGCCAGAAGGTAATTATCCAAG
P_CsVMV-R	CGGGATCCGGTCTCACATTACAAACTTACAAATTTCTCTG
P_35S-5'UTR-F	CGGTCTCAGGAGGGAAACCTCCTCGGATTCCAT
P_35S-5'UTR-R	CGGTCTCACATTCGCGAATTTGGGCAGAATATACAG
P_MAS-1-F	GGAATTCGGTCTCAGGAGTTTTCAAATCAGTGCGCAAG
P_MAS-1-R	CGGGATCCGGTCTCACATTCGATTTGGTGTATCGAGATTGG
P_Ocs-1-F	GGAATTCGGTCTCAGGAGATCATTAATTTCCACCTTCAC
P_Ocs-1-R	CGGGATCCGGTCTCACATTTTGGTAGATTGCAAATATAATG
P_AtAct 2-F	GGAATTCGGTCTCAGGAGTCGACAAAATTTAGAACGAAC
P_AtAct 2-R	CGGGATCCGGTCTCACATTTTCAAAGCGGAGAGGAAAATATATG
P_AtFBA2-F	GGAATTCGGTCTCAGGAGCCTACACATCCACTTGGCC
P_AtFBA2-R	CGGGATCCGGTCTCACATTTTTTTTTTGTGTGTGTTATC
P_AtRbcs1a-F	GGAATTCGGTCTCAGGAGAACATTCATACGTTTTCATTTG
P_AtRbcs1a-R	CGGGATCCGGTCTCACATTTGTTCTTCTTTACTCTTTGTG
P_AtUbq10-F	GGAATTCGGTCTCAGGAGTACCCGACGAGTCAGTAATAAAC
P_AtUbq10-R	CGGGATCCGGTCTCACATTAGTGTTAATCAGAAAAACTC
P_AtHsp18-F	GGAATTCGGTCTCAGGAGAAGCTTTTCTCTTCATTTCTC
P_AtHsp18-R	CGGGATCCGGTCTCACATTGACTTTTGGTTCTTGATTTTCC
P_AtHsp70-F	GGAATTCGGTCTCAGGAGGAACTGCGAAAAAAGGGAGC
P_AtHsp70-R	CGGGATCCGGTCTCACATTTGCTAAAAAAAAGCTTCAGTAATTG
P_At2S3-F	GGAATTCGGTCTCAGGAGGAAACCAAATTAACATAGG
P_At2S3-R	CGGGATCCGGTCTCACATTGTTTTGCTATTTGTGTATGTTTTC
P_AtBch1-F	GGAATTCGGTCTCAGGAGTGCCTTAATCTTGTCTGCAATG

P_AtBch1-R	CGGGATCCGGTCTCACATTCCTAATGGAAGGAGGAGCTAC
P_AtUbq3-F	ATGGTCTCAGGAGCAGAGCTAAATTCCAAAAAAAATATG
P_AtUbq3-R	ATGGTCTCACATTCTGAAATAAAACAATAGAACAAG
P_At3g24240-F	ATGGTCTCAGGAGGAAAAAGTGATGGAAACTCGG
P_At3g24240-R	ATGGTCTCACATTTTGCCTCAAAATACGAAAAGAAG
P_AtJAL34-F	GGAATTCGGTCTCAGGAGGCTAATGACATTAGATCG
P_AtJAL34-R	CGGGATCCGGTCTCACATTCGTTGTTGACTTCTTTTATC
P_AtWRKY6-F	GGAATTCGGTCTCAGGAGGTCGGTGACAAGCAACGAAAC
P_AtWRKY6-R	CGGGATCCGGTCTCACATTATATAGAAAAAGAAAGAGATCACG
P_AtHY5-F	GGAATTCGGTCTCAGGAGGAGCATTGGGTGTTGGTG
P_AtHY5-R	CGGGATTCGGTCTCACATTTTTTCTTACTCTTTGAAGATCG
P_CasP1-F	GGAATTCGGTCTCAGGAGAATAACGCATGCATTGTATTTGTATTC
P_CasP1-R	CGGGATTCGGTCTCACATTTTCTCTTGCAATTGGGGTTTAAAAG
P_DAISY-F	GGAATTCGGTCTCAGGAGATTAAATGCTCGCTTTGATTG
P_DAISY-R	CGGGATCCGGTCTCACATTGGTAGGTTTTTTGGTTTTAAATG
P_KCR1-F	GGAATTCGGTCTCAGGAGCCAAGAAAGTTGGAAGAGGAAG
P_KCR1-R	CGGGATCCGGTCTCACATTAGAGAAGAAAGGTTGAGACTTTGG
P_HORST-F	GGAATTCGGTCTCAGGAGTATGCATCGATGATGATTCTGCC
P_HORST-R	CGGGATCCGGTCTCACATTATCCCGGTTTAGGCTTTTTGC
P_GPAT5-F	GGAATTCGGTCTCAGGAGTGATCGCAAACGTCAATG
P_GPAT5-R	CGGGATCCGGTCTCACATTTCTTTTGTTTTTTGCTCG
P_ASTF-F	GGAATTCGGTCTCAGGAGCAGGGTTCTTCATCATCATTCAC
P_ASTF-R	CGGGATCCGGTCTCACATTTTGATCCAAATGGAGAAAACAGC
P_FAR4-F	GGAATTCGGTCTCAGGAGAGTTCTAACCCCGACATAAGG
P_FAR4-R	CGGGATCCGGTCTCACATTGAAGAAACTTATATCTATCC
P_AtIRX5-F	GGAATTCGGTCTCAGGAGATGAAGCCATCCTCTACCTCGG
P_AtIRX5-R	CGGGATCCGGTCTCACATTGGCGAGGTACACTGAGCTC
P_CYP86B1-F	GGAATTCGGTCTCAGGAGCTAAACACAACAAGTTTTCATGAG
P_CYP86B1-R	CGGGATCCGGTCTCACATTGTGACAAAGAGAAGAGAGAGCG
P_AtRD29A-F	ATTGGTCTCGGGAGGAGATTTGGGGTTTTGCTTTTG
P_AtRD29A-R	ATTGGTCTCACATTTCCAAAGATTTTTTTCTTTCC
P_AtRD29B-F	ATTGGTCTCGGGAGGCGTAATTTTCTAGATCCGTCTTGG
P_AtRD29B-R	ATTGGTCTCACATTTCCAAAGCTGTGTTTTCTC
P_MpUbiC-4-F	ATTGGTCTCGGGAGGGTATGAATCATTGTAGAGAC
P_MpUbiC-4-R	ATTGGTCTCACATTGATCCTTCTTCTTCTCACTCAC
P_MpUbiC-2-F	ATTGGTCTCGGGAGGTCGCTGTCCAGAGACACTTTTAC
P_MpUbiC-2-R	ATTGGTCTCACATTCTTCTCCCGACGACAACCG
P_MpUbiC-3-F	ATTGGTCTCGGGAGGATAGAGTTGATCGAGAGATTC
P_MpUbiC-3-R	ATTGGTCTCACATTCTTGGCGGAGCGCACCGG
P_MpEFla-5′UTR-F	ATTGGTCTCGGGAGGCAAATGAGTCACACACATTG
P_MpEFla-5′UTR-R	ATTGGTCTCACATTCAACCTTTCTGCAGGCAC
P_StGBSS-F	ATTGGTCTCGGGAGAAGCTTTAACGAGATAGAAAATTATATTAC
P_StGBSS-R	ATTGGTCTCACATTTGCATGAAATCAGAAATAATTGGAG
P_StUbi-F	ATTGGTCTCGGGAGGGAATCTAATACTTACCTCTTAG

P_StUbi-R	ATTGGTCTCACATTCTGCAAATTCATAAAAACAAC
P_StPat-F	ATTGGTCTCGGGAGAAGCTTATGTTGCCATATAGAG
P_StPat-R	ATTGGTCTCACATTTTTGCAAATGTTCAAAGTGTTTTTAAATTTTG
P_ZmUBQ1-F	ATTGGTCTCGGGAGGTAATGAGCATTGCATGTCTAAGTTATAAAAAATTACC
P_ZmUBQ1-R	ATTGGTCTCACATTAAATAATTATAAAACATACTTGTTTATTATAATAGATAGGTACTC
P_OsUbi-F	ATTGGTCTCGGGAGAGCCCCATTCACCACATTTG
P_OsUbi-R	ATTGGTCTCACATTCTGCACACACAATTACC
T_AtUbq10-F	GGAATTCGGTCTCAGCTTATCTCGTCTCTGTTATGCT
T_AtUbq10-R	CGGGATCCGGTCTCAAGCGCACTTATGTAACATACACTTTC
T_AtHsp70-F	GGAATTCGGTCTCAGCTTGCCTTTTGGCTTTTGTTTACTC
T_AtHsp70-R	CGGGATCCGGTCTCAAGCGGCGCATAACTTCTTAAAAG
T_AtHsp18.2-F	GGAATTCGGTCTCAGCTTATATGAAGATGAAGATGAAATATTTG
T_AtHsp18.2-R	CGGGATCCGGTCTCAAGCGTTCCATAGTCCATACCATAGCAC
T_AtAct2-F	GGAATTCGGTCTCAGCTTGCTCTCAAGATCAAAGGCTTAAAAAG
T_AtAct2-R	CGGGATCCGGTCTCAAGCGACTTTTTGGAATCAAGATGTATAAAC
T_AtG7-F	GGAATTCGGTCTCAGCTTACTGACTAACTAGGATGAGCTAAG
T_AtG7-R	CGGGATCCGGTCTCAAGCGCTCGAGAAGCTTGGTACCCG
T_At3g24240-F	GGAATTCGGTCTCAGCTTTTTTAAGGTTTGAAGGTTACGTG
T_At3g24240-R	CGGGATCCGGTCTCAAGCGACAATTTACAAACTAAGGTATAG
T_nos-F	GGAATTCGGTCTCAGCTTCGTTCAAACATTTGGCAATAAAG
T_nos-R	CGGGATCCGGTCTCAAGCGCCCGATCTAGTAACATAGATGAC
T_3'utr-nos-F	TTCGGTCTCAGCTTTTAACTCTGGTTTCATTAAATTTTC
T_3'utr-nos-R	TCCGGTCTCAAGCGAGAGATCTAGTAACATAGATG