

Supplementary Table S1

Statistics of the miRNA and mRNA sequencing data of J4A and J4B

	Type	J4A	J4B
mRNAs	Raw reads	434,942,372	441,384,782
	Clean reads	430,439,840	436,986,028
	Clean read %	98.96	99
	mRNAs		62,167
miRNAs	Raw reads	69,327,639	80,524,070
	Clean reads	49,185,274	64,452,578
	Unique reads	12,899,113	20,561,439
	Conserved miRNAs	62,956	274,335
	Novel miRNAs	9,875	14,082

Supplementary Table S2

Detailed information on the top 16 up-regulated and 10 down-regulated miRNAs

ID	J4B RPKM	J4A RPKM	Log ₂ (fold change)	p-val	Regulation
ghi-undef-366	0	5.792377678	-	0.005890658	up
ghi-undef-402	0	4.14178571	-	0.023840337	up
ghi-MIR164-4	0	8.514523918	-	0.028682569	up
ghi-undef-112	0	4.040286846	-	0.036246815	up
ghi-undef-247	6.57816189	559.2783486	6.409738156	8.38E-07	up
ghi-undef-286	5.42595457	69.06595539	3.670025866	0.033453193	up
ghi-undef-329	5.739396465	72.19740999	3.652976142	0.018802719	up
ghi-MIR8674-3	22.10800128	274.3479711	3.633366401	0.021313734	up
ghi-undef-274	0.397173405	4.845444977	3.608788234	0.037878159	up
ghi-MIR7494-1	18.38174832	162.5480187	3.144520076	0.049689517	up

ghi-undef-156	10.41542284	88.61197648	3.088780291	0.046509228	up
ghi-MIR7486-7	5.753338565	40.62567599	2.819920543	0.030575922	up
ghi-MIR8674-1	5.997600586	41.28574665	2.783186443	0.043863191	up
ghi-MIR7484-10	10.60513371	57.64723496	2.4424886	0.048856366	up
ghi-undef-259	12.12464746	58.40728532	2.268205533	0.038042593	up
ghi-MIR390-1	234.1766906	686.7774391	1.552245167	0.048809194	up
ghi-undef-222	335.1554302	23.51607675	-3.833111012	2.61E-05	down
ghi-undef-325	15.87436733	1.798336247	-3.141964393	0.02789001	down
ghi-MIR171_1-21	23.2157918	2.803835297	-3.049632976	0.018237255	down
ghi-MIR171_1-22	34.60582459	4.53128426	-2.933022979	0.015997398	down
ghi-MIR171_1-10	43.15720756	7.90932519	-2.447975003	0.034086607	down
ghi-MIR156-36	133.3452977	29.41250316	-2.180665475	0.034494997	down
ghi-MIR156-8	1167.816527	287.1873341	-2.023749605	0.0111208	down
ghi-undef-215	380.9918972	100.0102848	-1.929611944	0.037517776	down
ghi-undef-495	847.4236732	226.9985585	-1.900400295	0.027456708	down
ghi-MIR166-15	4129.406964	1134.188268	-1.864274469	0.022129182	down

Supplementary Table S3

MiRNA-mRNA target gene regulatory pairs.

miRNA	mRNA	Gene	Annotation	miRNA regulation	mRNA regulation
ghi-MIR164-4	gene2947	LOC10789270 1	ankyrin repeat domain-containing protein 13B-like	S_up	F_up
ghi-MIR164-4	gene80	LOC10789786 6	uncharacterized LOC107897866	S_up	F_up

ghi-MIR164-4	gene83	LOC107898061	uncharacterized LOC107898061	S_up	F_up
ghi-MIR7484-10	gene66543	LOC107932209	mitogen-activated protein kinase kinase 6- like MAPKK	S_up	F_up
ghi-MIR7494-1	gene34590	LOC107897201	mitochondrial arginine transporter BAC2-like	S_up	F_up
ghi-MIR8674-3	gene17450	LOC107956798	uncharacterized LOC107956798	S_up	F_up
ghi-undef-156	gene9678	LOC107946987	agamous-like MADS- box protein AGL19	S_up	F_up
ghi-undef-247	gene57922	LOC107924800	E3 ubiquitin protein ligase DRIP2-like	S_up	F_up
ghi-undef-366	gene20742	LOC107960817	uncharacterized LOC107960817	S_up	F_up
ghi-MIR156-36/8	gene52076	LOC107916259	uncharacterized protein At5g05190	F_up	S_up
ghi-MIR156-36/8	gene69845	LOC107935885	probable WRKY transcription factor 28	F_up	S_up
ghi-MIR156-8	gene43509	LOC107906859	homeobox protein knotted-1-like 3	F_up	S_up
ghi-MIR166-15	gene33424	LOC107895419	protein ABSCISIC ACID-INSENSITIVE 5- like	F_up	S_up
ghi-MIR166-15	gene44631	LOC107907684	protein ABSCISIC ACID-INSENSITIVE 5- like	F_up	S_up
ghi-MIR166-15	gene62048	LOC107927187	respiratory burst oxidase homolog protein B-like	F_up	S_up
ghi-MIR166-15	gene62870	LOC107928148	protein ABSCISIC ACID-INSENSITIVE 5- like	F_up	S_up

ghi-MIR171_1-10	gene2731 8	LOC10788866 1	probable galactinol-- sucrose galactosyltransferase 5	F_up	S_up
ghi-MIR171_1-10/21	gene5589	LOC10792404 4	scarecrow-like protein 6	F_up	S_up
ghi-MIR171_1-10/21	gene5846	LOC10792617 0	scarecrow-like protein 6	F_up	S_up
ghi-MIR171_1-10/21	gene7945	LOC10794553 6	scarecrow-like protein 6	F_up	S_up
ghi-MIR171_1-22	gene1263 9	LOC10795046 9	probable trehalose- phosphate phosphatase J	F_up	S_up
ghi-MIR171_1-22	gene4783 7	LOC10791205 6	probable LRR receptor- like serine/threonine- protein kinase	F_up	S_up
ghi-MIR171_1-22	gene4946 8	LOC10791341 8	SNF1-related protein kinase regulatory subunit gamma-1	F_up	S_up
ghi-MIR171_1-22	gene5862 3	LOC10792347 3	probable polygalacturonase	F_up	S_up
ghi-MIR171_1-22	gene5991 4	LOC10792523 8	protein trichome birefringence-like 38	F_up	S_up
ghi-undef-215	gene2471 8	LOC10796389 1	uncharacterized LOC107963891	F_up	S_up
ghi-undef-215	gene2861 6	LOC10788968 7	trafficking protein particle complex subunit 4-like	F_up	S_up
ghi-undef-215	gene5867 8	LOC10792438 7	transmembrane protein 120 homolog	F_up	S_up
ghi-undef-222	gene1073 4	LOC10794853 4	uncharacterized LOC107948534	F_up	S_up
ghi-undef-222	gene1090 2	LOC10794863 8	protochlorophyllide reductase, chloroplastic-like	F_up	S_up

ghi-undef-325	gene4989	LOC10791380	probable inositol	F_up	S_up
	3	5	transporter 2		

Supplementary Table S4

Primers of qRT-PCR

Gene	Forward primer sequences	Reverse primer sequences
U6	CATTTCTCGATTGTGCGTC	GGGGACATCCGATAAAATTGG
18S	ATCAGCTCGCGTTGACTACGT	ACACTTCACCGGACCATTCAAT
ghi-MIR7484-10	CCGCTTTGATCTAGTGTATGGAGACT	
MAPKK6	AGAAACCGCCGAAGCCACTGA	TGAAAGGCGCAGGATCCCGA
ghi-undef-156	CCTGGGATCTTCGAGAGAATTGA	
AGL19	GCGTGAAGAGTGTGGGATGCGA	TCTTCTCTCCGGTGGGCCAA
ghi-MIR171_1-22	CCAGATATTGGTGCGGTTCAATT	
TBL38	GGCAAAATGGAGGGGAAAGAAA	GAGTTGGGCACAGAAGCATGA A
ghi-MIR156-8	GGGCTCTCTATGCTTCTGTCATC	
WRKY28	AGCAGCACTGTTCCCGCCTT	GCGCCGCCATCTGCATAAACA