

Supplement 1. Information of the primer pairs used for qRT-PCR analysis in this study.

Gene name	Primer Sequences (5 →3)	PCR production length (bp)	NCBI accession number
<i>ACTIN</i>	Forward: TCCCGAGTATTGTTGGTCGT Reverse: TCCATGTCATCCCAGTTGCT	157	XM_013858992.2
<i>PRK</i>	Forward: TGTGGAGATGGATGGGCAAT Reverse: AAGACCAGTTCCGTTGTTGC	151	XM_013876015.2
<i>GDC</i>	Forward: AGGCGGAGTTAGACAGGTTCC Reverse: CGGCTTCTTCCATGTGTCTG	152	XM_009126871.1
<i>FNRI</i>	Forward: ACTGGTCGATGCCTCTTGAA Reverse: GGCTTCCGTTCTTGTC AAT	152	XM_013833058.1

Supplement 2. The functional enrichment of up-regulated and down-regulated genes. **(Please See Excel File)**

Supplement 3. The potential miRNA of hub genes in Canola under drought stress.

miRNA Acc.	Target Acc.	Expectation	Target_start	Target_end	Inhibition	Target_Des.
bra-miR5721	XM_013884179.3	4.5	666	686	Cleavage	<i>ACP4</i>
ath-miR5020a	XM_013801420.3	3	237	257	Cleavage	<i>AT1G32470</i>
ath-miR413	XM_013801420.3	4	713	733	Cleavage	<i>AT1G32470</i>
ath-miR853	XM_048742967.1	4	344	365	Cleavage	<i>AT5G58330</i>
bra-miR172c-5p	XM_013805935.3	4.5	809	829	Cleavage	<i>FNRI</i>
bra-miR9563b-3p	XM_013805935.3	4.5	1474	1495	Cleavage	<i>FNRI</i>
ath-miR833a-5p	XM_013805935.3	4	1279	1300	Cleavage	<i>FNRI</i>
ath-miR834	XM_013805935.3	4	247	267	Cleavage	<i>FNRI</i>
ath-miR158b	XM_013805935.3	4.5	1194	1213	Cleavage	<i>FNRI</i>
ath-miR4243	XM_013805935.3	4.5	959	979	Cleavage	<i>FNRI</i>
ath-miR5012	XM_013805935.3	4.5	1286	1306	Translation	<i>FNRI</i>
ath-miR5016	XM_013805935.3	4.5	630	652	Cleavage	<i>FNRI</i>
ath-miR5649a	XM_013805935.3	4.5	474	494	Cleavage	<i>FNRI</i>
ath-miR5649b	XM_013805935.3	4.5	474	494	Cleavage	<i>FNRI</i>
bra-miR403-5p	NM_001315812.1	4.5	1262	1283	Cleavage	<i>HCEFI</i>
ath-miR1886.1	NM_001315812.1	4.5	43	62	Translation	<i>HCEFI</i>
ath-miR5641	NM_001315812.1	4.5	39	59	Cleavage	<i>HCEFI</i>
bra-miR5721	XM_013876023.3	2.5	332	352	Cleavage	<i>PRK</i>
bra-miR161-3p	XM_013876023.3	4.5	1274	1294	Cleavage	<i>PRK</i>
bra-miR9558-5p	XM_013876023.3	4.5	1624	1644	Cleavage	<i>PRK</i>
ath-miR1888a	XM_013876023.3	2.5	65	85	Cleavage	<i>PRK</i>
ath-miR5021	XM_013876023.3	3.5	1743	1762	Cleavage	<i>PRK</i>
ath-miR1888b	XM_013876023.3	4	66	86	Cleavage	<i>PRK</i>
ath-miR5014a-3p	XM_013876023.3	4	1877	1897	Cleavage	<i>PRK</i>
ath-miR854a	XM_013876023.3	4	324	344	Translation	<i>PRK</i>
ath-miR854b	XM_013876023.3	4	324	344	Translation	<i>PRK</i>
ath-miR854c	XM_013876023.3	4	324	344	Translation	<i>PRK</i>
ath-miR854d	XM_013876023.3	4	324	344	Translation	<i>PRK</i>
ath-miR854e	XM_013876023.3	4	324	344	Translation	<i>PRK</i>
ath-miR5020a	XM_013876023.3	4.5	272	292	Cleavage	<i>PRK</i>
ath-miR8170-3p	XM_013876023.3	4.5	1852	1872	Cleavage	<i>PRK</i>
bra-miR390-5p	XM_013879129.3	4	170	190	Cleavage	<i>RCA</i>
bn-miR390a	XM_013879129.3	4	170	190	Cleavage	<i>RCA</i>
bn-miR390b	XM_013879129.3	4	170	190	Cleavage	<i>RCA</i>
bn-miR390c	XM_013879129.3	4	170	190	Cleavage	<i>RCA</i>
ath-miR863-5p	XM_013879129.3	3.5	455	476	Cleavage	<i>RCA</i>
ath-miR167a-3p	XM_013879129.3	4	851	871	Translation	<i>RCA</i>
ath-miR390a-5p	XM_013879129.3	4	170	190	Cleavage	<i>RCA</i>
ath-miR390b-5p	XM_013879129.3	4	170	190	Cleavage	<i>RCA</i>
ath-miR5633	XM_013879129.3	4	1730	1750	Translation	<i>RCA</i>
ath-miR156i	XM_013879129.3	4.5	1680	1698	Cleavage	<i>RCA</i>
ath-miR5015	XM_013879129.3	4.5	667	687	Translation	<i>RCA</i>
ath-miR840-5p	XM_013879129.3	4.5	1346	1367	Cleavage	<i>RCA</i>
ath-miR869.2	XM_013879129.3	4.5	899	919	Cleavage	<i>RCA</i>