

**Supplementary Table S7 GO terms for miRNA-mRNA**

miRNA-mRNA-GO		
A:miR169o-5p-GRMZM2G165488- GO:0016602\ GO:0009793\ GO:0006355-DGEs		
GO	Gene	Description
GO:0016602	GRMZM2G091964	uncharacterized protein
GO:0016602	GRMZM2G104396	Nuclear transcription factor Y subunit A-7
GO:0016602	GRMZM2G165488	uncharacterized protein
GO:0016602	GRMZM5G829103	nuclear transcription factor Y subunit A-10 isoform X1
GO:0009793	GRMZM2G091964	uncharacterized protein
GO:0009793	GRMZM2G134396	Nuclear transcription factor Y subunit A-7
GO:0009793	GRMZM2G347043	NAC1 transcription factor
		CRM-domain containing factor CFM3,
GO:0009793	GRMZM5G813259	chloroplastic/mitochondrial-like
GO:0009793	GRMZM2G002898	putative cytochrome P450 superfamily protein
GO:0009793	GRMZM2G161245	Malate dehydrogenase
		putative bZIP transcription factor superfamily protein
GO:0006355	GRMZM2G033230	
GO:0006355	GRMZM2G179325	scarecrow-like protein 34
GO:0006355	GRMZM2G416701	AP2-like ethylene-responsive transcription factor TOE3
GO:0006355	GRMZM2G033612	uncharacterized protein
GO:0006355	GRMZM2G165488	uncharacterized protein
GO:0006355	GRMZM2G380377	DRE-binding protein 4
GO:0006355	GRMZM2G478417	bZIP transcription factor TRAB1
		AP2-like ethylene-responsive transcription factor BBM2
GO:0006355	GRMZM2G399072	isoform X2
GO:0006355	GRMZM2G416701	AP2-like ethylene-responsive transcription factor TOE3
GO:0006355	GRMZM2G061734	SBP-transcription factor 5
GO:0006355	GRMZM2G180328	putative NAC domain transcription factor superfamily protein
GO:0006355	mbd109	unknown
GO:0006355	GRMZM2G104396	Nuclear transcription factor Y subunit A-7
GO:0006355	GRMZM5G829103	nuclear transcription factor Y subunit A-10 isoform X1
GO:0006355	GRMZM2G086573	AP2-like ethylene-responsive transcription factor AIL5
GO:0006355	GRMZM2G131577	Transcription factor BTF3
GO:0006355	GRMZM2G119865	ethylene-responsive transcription factor RAP2-9
GO:0006355	GRMZM2G061734	SBP-transcription factor 5
		ethylene-responsive transcription factor RAP2-13-like
GO:0006355	GRMZM2G141679	
GO:0006355	GRMZM2G091964	uncharacterized protein LOC100282719 isoform X1
		AP2-like ethylene-responsive transcription factor BBM2
GO:0006355	GRMZM2G399072	isoform X2
		uncharacterized protein
GO:0006355	GRMZM2G488465	
GO:0006355	GRMZM2G025062	AP2-EREBP transcription factor, partial

GO:0006355	GRMZM2G104078	putative NAC domain transcription factor superfamily protein
GO:0006355	GRMZM2G133568	MADS-box transcription factor 27 isoform X1
GO:0006355	GRMZM2G124566	growth-regulating factor
GO:0006355	GRMZM2G409224	uncharacterized protein
B:zma-miR390a-5p-GRMZM2G134396\ GO:0009737\ GO:0009793\ GO:0003876-DEGs		
GO	Gene	Description
GO:0009737	GRMZM2G478709	pre-mRNA-splicing factor prp45
GO:0009737	GRMZM2G338259	auxin response factor 10
		CRM-domain containing factor CFM3,
GO:0009737	GRMZM5G813259	chloroplastic/mitochondrial-like
GO:0009737	GRMZM2G006119	corticosteroid 11-beta-dehydrogenase isozyme 1
GO:0009737	GRMZM2G134396	WRKY transcription factor, partial
GO:0009793	GRMZM2G091964	uncharacterized protein LOC100282719 isoform X1
GO:0009793	GRMZM2G134396	WRKY transcription factor, partial
GO:0009793	GRMZM2G347043	NAC1 transcription factor
		CRM-domain containing factor CFM3,
GO:0009793	GRMZM5G813259	chloroplastic/mitochondrial-like
GO:0009793	GRMZM2G002898	putative cytochrome P450 superfamily protein
GO:0009793	GRMZM2G161245	Malate dehydrogenase
GO:0003876	GRMZM2G134396	WRKY transcription factor, partial
C:zma-miR396c_L-1-GRMZM2G098594\ GO:0008757\ GO:0032259\ GO:0009739\ GO:0030912-DEGs		
GO	Gene	Description
GO:0008757	GRMZM2G041223	putative growth-regulating factor 6
GO:0008757	GRMZM2G119359	putative growth-regulating factor 12
GO:0008757	GRMZM2G098594	putative growth-regulating factor 14
GO:0032259	GRMZM2G041223	putative growth-regulating factor 6
GO:0032259	GRMZM2G119359	putative growth-regulating factor 12
GO:0032259	GRMZM2G098594	putative growth-regulating factor 14
GO:0032259	GRMZM2G172529	uncharacterized protein
GO:0009739	GRMZM2G133568	MADS-box transcription factor 27 isoform X1
GO:0030912	GRMZM2G133568	MADS-box transcription factor 27 isoform X1
D:zma-miR396c_L-1-GRMZM2G105335\ GO:0009739\ GO:0030912-DEGs		
GO	Gene	Description
GO:0009739	GRMZM2G105335	putative growth-regulating factor 3
GO:0030912	GRMZM2G105335	putative growth-regulating factor 3
E:zma-miR396c_L-1-GRMZM2G133568\ GO:0000977\ GO:0007275-DEGs		
GO	Gene	Description
GO:0000977	GRMZM2G421212	GATA transcription factor 26
GO:0000977	GRMZM2G133568	MADS-box transcription factor 27 isoform X1
GO:0000977	GATA23	GATA transcription factor 23
		AP2-like ethylene-responsive transcription factor BBM2
GO:0007275	GRMZM2G399072	isoform X2
GO:0007275	GRMZM2G347043	NAC1 transcription factor

GO:0007275	GRMZM2G086573	AP2-like ethylene-responsive transcription factor AIL5
GO:0007275	GRMZM2G104078	putative NAC domain transcription factor superfamily protein
GO:0007275	GRMZM2G180328	putative NAC domain transcription factor superfamily protein
GO:0007275	GRMZM2G177878	uncharacterized protein
GO:0007275	GRMZM2G040762	uncharacterized protein
F:zma-miR397b-p5-GRMZM2G033230\ GO:0006355\ GO: 0006970\ GO: 0009409\ GO: 0009651-DEGs		
GO	Gene	Description
GO:0006355	GRMZM2G033230	putative bZIP transcription factor superfamily protein
GO:0006355	GRMZM2G179325	scarecrow-like protein 34
GO:0006355	GRMZM2G416701	AP2-like ethylene-responsive transcription factor TOE3
GO:0006355	GRMZM2G033612	uncharacterized protein
GO:0006355	GRMZM2G165488	uncharacterized protein
GO:0006355	GRMZM2G380377	DRE-binding protein 4
GO:0006355	GRMZM2G478417	bZIP transcription factor TRAB1
		AP2-like ethylene-responsive transcription factor BBM2
GO:0006355	GRMZM2G399072	isoform X2
GO:0006355	GRMZM2G416701	AP2-like ethylene-responsive transcription factor TOE3
GO:0006355	GRMZM2G061734	SBP-transcription factor 5
GO:0006355	GRMZM2G180328	putative NAC domain transcription factor superfamily protein
GO:0006355	mbd109	unknown
GO:0006355	GRMZM2G104396	Nuclear transcription factor Y subunit A-7
GO:0006355	GRMZM5G829103	nuclear transcription factor Y subunit A-10 isoform X1
GO:0006355	GRMZM2G086573	AP2-like ethylene-responsive transcription factor AIL5
GO:0006355	GRMZM2G131577	Transcription factor BTF3
GO:0006355	GRMZM2G119865	ethylene-responsive transcription factor RAP2-9
GO:0006355	GRMZM2G061734	SBP-transcription factor 5
GO:0006355	GRMZM2G141679	ethylene-responsive transcription factor RAP2-13-like
GO:0006355	GRMZM2G091964	uncharacterized protein LOC100282719 isoform X1
		AP2-like ethylene-responsive transcription factor BBM2
GO:0006355	GRMZM2G399072	isoform X2
GO:0006355	GRMZM2G488465	uncharacterized protein LOC100381775
GO:0006355	GRMZM2G025062	AP2-EREBP transcription factor, partial
GO:0006355	GRMZM2G104078	putative NAC domain transcription factor superfamily protein
GO:0006355	GRMZM2G133568	MADS-box transcription factor 27 isoform X1
GO:0006355	GRMZM2G124566	growth-regulating factor
GO:0006355	GRMZM2G409224	uncharacterized protein LOC100273824
GO: 0006970	GRMZM2G033230	putative bZIP transcription factor superfamily protein
GO: 0006970	GRMZM2G141679	ethylene-responsive transcription factor RAP2-13-like
GO: 0009409	GRMZM2G380377	DRE-binding protein 4
GO: 0009409	GRMZM2G161245	Malate dehydrogenase
GO: 0009409	GRMZM2G141679	ethylene-responsive transcription factor RAP2-13-like
GO: 0009409	GRMZM2G033230	putative bZIP transcription factor superfamily protein

GO: 0009651	GRMZM2G141679	ethylene-responsive transcription factor RAP2-13-like
GO: 0009651	GRMZM2G729818	uncharacterized protein LOC100191463
GO: 0009651	GRMZM2G153815	heat shock 70 kDa protein
GO: 0009651	GRMZM2G033230	putative bZIP transcription factor superfamily protein
GO: 0009651	GRMZM2G131577	Transcription factor BTF3
GO: 0009651	GRMZM2G120652	Pyridoxal 5'-phosphate synthase-like subunit PDX1.2
GO: 0009651	GRMZM2G478709	pre-mRNA-splicing factor prp45
H:miR444a-GRMZM2G399072- GO: 0007275\ GO: 0009873\ GO: 1905392\ GO:0005524-DEGs		
GO	Gene	Description
	GRMZM2G399072	AP2-like ethylene-responsive transcription factor BBM2 isoform X2
GO: 0007275		
GO: 0007275	GRMZM2G347043	NAC1 transcription factor
GO: 0007275	GRMZM2G086573	AP2-like ethylene-responsive transcription factor AIL5
GO: 0007275	GRMZM2G133568	MADS-box transcription factor 27 isoform X1
GO: 0007275	GRMZM2G104078	putative NAC domain transcription factor superfamily protein
GO: 0007275	GRMZM2G180328	putative NAC domain transcription factor superfamily protein
GO: 0007275	GRMZM2G177878	uncharacterized protein
GO: 0007275	GRMZM2G040762	uncharacterized protein
	GRMZM2G399072	AP2-like ethylene-responsive transcription factor BBM2 isoform X2
GO: 0009873		
GO: 0009873	GRMZM2G119865	ethylene-responsive transcription factor RAP2-9
GO: 0009873	GRMZM2G086573	ponsive transcription factor AIL5
GO: 0009873	GRMZM2G141679	ethylene-responsive transcription factor RAP2-13-like
GO: 0009873	GRMZM2G025062	AP2-EREBP transcription factor, partial
	GRMZM2G399072	AP2-like ethylene-responsive transcription factor BBM2 isoform X2
GO: 1905392		
GO: 1905392	GRMZM2G086573	AP2-like ethylene-responsive transcription factor AIL5
GO:0005524	GRMZM2G104262	cryptochrome 2
GO:0005524	GRMZM2G359038	uncharacterized protein
GO:0005524	GRMZM2G124566	growth-regulating factor
GO:0005524	GRMZM5G890820	uncharacterized protein

Note: (A) zma-miR169o-5p\_ R-1-*GRMZM2G165488* and related GO terms "GO: 0006355, GO: 0009793 and GO: 0016602" corresponding DEGs. (B ) zma-miR390a-5p-*GRMZM2G134396* and related GO terms " GO : 0009737, GO:0009793 , GO:0003876" and corresponding DEGs. (C) zma-miR396c\_ L-1- *GRMZM2G098594* and related GO terms " GO: 008757, GO-0032259 , GO: 0009739 , GO: 0030912 and other corresponding DEGs. (D) zma-miR396c\_ L-1- *GRMZM2G105335* and related GO terms "GO: 0009739, GO: 0030912 and other corresponding DEGs. (E) zma-miR396c\_ L-1- *GRMZM133568* and related GO terms " GO: 0000977, GO: 007275" and other corresponding DEGs. (F) zma-miR397b-p5-*GRMZM2G033230* and related GO terms"GO:0006355, GO: 0006970, GO: 0009409 and GO: 0009651 "corresponding DEGs. (G) zma-miR444a\_ 1ss12TC-*GRMZM2G399072* and related GO terms"GO : 0007275,GO : 0009873 and GO : 1905392"corresponding DEGs. (H) novel-miR4-*GRMZM2G009871* and related GO terms"GO:0046686 and GO:0005524" corresponding DEGs.