

Supplementary material:

Table 1: MAPK members with abiotic components.

Class of Species	Name
SIMPLE_MOLECULE	Cold
SIMPLE_MOLECULE	Salt
SIMPLE_MOLECULE	Drought
SIMPLE_MOLECULE	H2O2
SIMPLE_MOLECULE	Heavy Metal
SIMPLE_MOLECULE	Ethylene
PROTEIN	RLKs
PROTEIN	LRR
PROTEIN	CRKs
PROTEIN	LecRK2
PROTEIN	ETR1
PROTEIN	ETR2
PROTEIN	MAPKKK
PROTEIN	MAPKKK
PROTEIN	MAPKKK1
PROTEIN	CTR1
PROTEIN	MAPKK
PROTEIN	MAPKK
PROTEIN	MAPK
PROTEIN	MAPK
PROTEIN	MAPKK1
PROTEIN	MAPKK2
PROTEIN	MAPKK3
PROTEIN	MAPKK4
PROTEIN	MAPKK5
PROTEIN	MAPKK6
PROTEIN	MAPKK7
PROTEIN	MAPKK9
PROTEIN	MAPK2
PROTEIN	MAPK3
PROTEIN	MAPK4
PROTEIN	MAPK6
PROTEIN	WRKY1
PROTEIN	WRKY1
PROTEIN	WRKY12
PROTEIN	WRKY12
PROTEIN	WRKY8
PROTEIN	WRKY8
PROTEIN	WRKY25
PROTEIN	WRKY25
PROTEIN	WRKY22
PROTEIN	WRKY22
PROTEIN	WRKY29
PROTEIN	WRKY29
PROTEIN	WRKY33
PROTEIN	WRKY33
PROTEIN	WRKY28
PROTEIN	WRKY28
PROTEIN	MYB2
PROTEIN	MYB2
PROTEIN	MYB4
PROTEIN	MYB4
PROTEIN	MYB44
PROTEIN	NAC
PROTEIN	bZIP
PROTEIN	AP2
PHENOTYPE	Response (Cell division, cell growth and cell differentiation)

Table 2: MAPKs members with biotic components.

Class of Species	Name
SIMPLE_MOLECULE	Fungal pathogen
SIMPLE_MOLECULE	Bacterial pathogen
PROTEIN	LysM
PROTEIN	PRRs
PROTEIN	FLS2
PROTEIN	LRR
PROTEIN	MAPKKK
PROTEIN	MAPKKK
PROTEIN	MAPKKK1
PROTEIN	MAPKKK18
PROTEIN	MAPKKK19
PROTEIN	MAPKKK20
PROTEIN	EDR1
PROTEIN	MAPKK
PROTEIN	MAPKK
PROTEIN	MAPKK2
PROTEIN	MAPKK4
PROTEIN	MAPKK5
PROTEIN	MAPKK9
PROTEIN	MAPK
PROTEIN	MAPK
PROTEIN	MAPK2
PROTEIN	MAPK3
PROTEIN	MAPK4
PROTEIN	MAPK6
PROTEIN	SIMK
PROTEIN	SAMK
PROTEIN	WRKY1
PROTEIN	WRKY1
PROTEIN	MYB2
PROTEIN	MYB2
PROTEIN	WRKY33
PROTEIN	WRKY33
PROTEIN	WRKY6
PROTEIN	WRKY6
PROTEIN	MYB4
PROTEIN	MYB4
PROTEIN	WRKY25
PROTEIN	WRKY25
PROTEIN	WRKY12
PROTEIN	WRKY12
PROTEIN	WRKY22
PROTEIN	WRKY22
PROTEIN	WRKY28
PROTEIN	WRKY28
PROTEIN	WRKY29
PROTEIN	WRKY29
PROTEIN	MYB44
PROTEIN	NAC
PROTEIN	bZIP
PROTEIN	AP2
PHENOTYPE	Response (Cell division, cell growth and cell differentiation)