

**Table S1.** TFs responsive to light, hormone, wounding and pathogen stimulation found in the entire *S. miltiorrhiza* HMGR4 promoter sequence using PlantPan 2.0 database.

TF family name	TF name
<b>light-responsive TFs</b>	
bHLH	BHLH63, PIF1
bZIP	BZIP54
Dehydrin	COR15A
Dof	DOF1.5, DOF1.10, DOF2.5, DOF3.3, DOF5.2
GATA	GATA1, GATA2, GATA3, GATA4, GATA5, GATA8, GATA9, GATA21, GATA22, GATA23
Homeodomain; bZIP; HD-ZIP	ATHB-1
Homeodomain; HD-ZIP	ATHB-2, ATHB-4, ATHB-16
MYB-related/Myb/SANT	RVE7
NAC; NAM	NAC081
<b>auxin-responsive TFs</b>	
bHLH	BEE1, BEE3
Dof	DOF1.1, DOF3.4, DOF3.6
Homeodomain; bZIP; HD-ZIP	ATHB-15
Homeodomain; HB-PHD	PRH
Homeodomain; HD-ZIP	ATHB-2, ATHB-20
MADS box ;MIKC	AGL14, AGL15
MYB-related	CCA1, RVE4, RVE5, RVE8
Myb/SANT; MYB	MYB6
NAC; NAM	NAC030, NAC101
WRKY	WRKY23
<b>SA-responsive TFs</b>	
bHLH	BHLH66
CAMTA	CAMTA2, CAMTA4, CAMTA6
CSD	CSP2
Dof	DOF1.1, DOF3.4, DOF3.6
MYB	MYB46
MYB-related	CCA1, RVE4, RVE5, RVE6, RVE8
Myb/SANT	MYB3, MYB6
NAC; NAM	NAC062, NAC081
WRKY	WRKY3, WRKY4, WRKY6, WRKY7, WRKY8, WRKY15, WRKY18, WRKY21, WRKY26, WRKY30, WRKY40, WRKY53, WRKY54, WRKY60, WRKY70
<b>brassinosteroid-responsive TFs</b>	
AP2; B3; RAV	RAV1
bHLH	BEE1, BEE3
NAC; NAM	NAC030, NAC081, NAC101
<b>ethylene-responsive TFs</b>	
AP2; ERF	RAP2-2
bHLH	BEE1, BEE3, BHLH66
C2H2	AZF2, AZF3
CAMTA	CAMTA1, CAMTA4
CG-1; CAMTA	CAMTA3
CSD	CSP2
MYB-related	CCA1, RVE4, RVE5, RVE6, RVE8
MYB-related/Myb/SANT	RVE7
Myb/SANT;ARR-B	ARR2
Myb/SANT; MYB	MYB6
NAC; NAM	NAC029
WRKY	WRKY4, WRKY6
<b>ABA-responsive TFs</b>	

bHLH	BEE1, BEE3, MYC2, SCRM
bZIP	ABF3, ABF4
C2H2	AZF2, AZF, ZAT10
CG-1; CAMTA	CAMTA2, CAMTA4, CAMTA6
CSD	CSP2
Dehydrin	COR15A
Homeodomain; HD-ZIP	HAT22
MYB-related	CCA1, RVE4, RVE5, RVE6, RVE8
Myb/SANT	MYB7
Myb/SANT; MYB	MYB3
NAC; NAM	NAC019, NAC029, NAC032, NAC055, NAC062, NAC072
WRKY	WRKY8
ZF-HD	ZHD5
<b>MeJa-responsive TFs</b>	
AP2; ERF	RAP2-3
bHLH	MYC2
CAMTA	CAMTA1, CAMTA4
CG-1; CAMTA	CAMTA3
NAC; NAM	NAC081
<b>wounding-responsive TFs</b>	
C2H2	ZAT10
CAMTA	CAMTA1, CAMTA4, CAMTA6
CG-1; CAMTA	CAMTA2, CAMTA3
NAC; NAM	NAC002, NAC081
WRKY	WRKY6, WRKY8, WRKY20, WRKY40
<b>pathogen-responsive TFs</b>	
CG-1; CAMTA	CAMTA3
Homeodomain; HB-PHD	PRH
Myb/SANT; MYB	MYB6
NAC; NAM	NAC081, NAC091
SBP	SPL14
WRKY	WRKY4, WRKY6, WRKY8, WRKY11, WRKY17, WRKY18, WRKY23, WRKY27, WRKY33, WRKY38, WRKY48, WRKY53, WRKY60