

Supplementary data

***In silico* analysis of putative transcription factor binding sites in differentially expressed genes: Study of the turnover of TFBSs under salt stress responsiveness in solanaceae family**

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Supplementary Table 1. PWMs for the known TF-TFBS.

Transcription Factors (TF)	Position Weight Matrix (PWM)											
<i>Capsicum annuum</i>												
CaWRKYb	a	0	0	1	0							
	c	0	0	0	1							
	g	0	1	0	0							
	t	1	0	0	0							
CaPF1	a	0	0	0	1	0						
	c	1	1	0	0	1						
	g	0	0	1	0	0						
	t	0	0	0	0	0						
CaERFLP1	a	0	1	1	0	1	0	0	0	0	0	0
	c	0	0	0	0	0	0	1	1	0	1	1
	g	0	0	0	1	0	1	0	0	1	0	0
	t	1	0	0	0	0	0	0	0	0	0	0
Ca-DREBLP1	a	0	1	0	0	0	1	0	1	0		
	c	0	0	1	1	0	0	1	0	0		
	g	0	0	0	0	1	0	0	0	0		
	t	1	0	0	0	0	0	0	0	1		
<i>Nicotiana benthamiana</i>												
bHLH	a	0	0	1	0	0	0	0	0			
	c	0	1	0	1	0	0	0	0			
	g	1	0	0	0	1	0	0	0			
	t	0	0	0	0	0	1	1	0			
WRKY8	a	0	0	0	1	0	0					
	c	0	0	0	0	1	1					
	g	0	0	1	0	0	0					
	t	1	1	0	0	0	1					
AP2/ERF	a	0	0	1	0	0	0	0				
	c	0	1	0	0	0	1	1				
	g	1	0	0	1	1	0	0				
	t	0	0	0	0	0	0	0				
<i>Nicotiana tabacum</i>												
bZIP	a	0	0	1	0	0	0	0	1			
	c	0	0	0	1	0	0	1	0			
	g	0	1	0	0	1	0	0	0			
	t	1	0	0	0	0	1	0	0			
WRKY	a	0	0	0	1	0						
	c	0	0	0	0	1						
	g	0	0	1	0	0						
	t	1	1	0	0	0						

JERF	a	1	0	0	0	0	0	0			
	c	0	0	1	1	0	1	1			
	g	0	1	0	0	1	0	0			
	t	0	0	0	0	0	0	0			
NtWRKY12	a	0	0	0	0	0	0	1	0		
	c	0	0	0	0	1	1	0	1		
	g	0	0	0	0	0	0	0	0		
	t	1	1	1	1	0	0	0	0		
EREBP/AP2	a	0	1	1	0	1	0	0	0	0	0
	c	0	0	0	0	0	0	1	1	0	1
	g	0	0	0	1	0	1	0	0	1	0
	t	1	0	0	0	0	0	0	0	0	0
MYC2	a	0	0	1	0	0	0	0	0		
	c	0	1	0	1	0	0	0	0		
	g	1	0	0	0	1	0	0	1		
	t	0	0	0	0	0	1	1	0		
<i>Petunia hybrid</i> MYB.Ph3	a	1	1	1	1	1	1	0	0		
	c	0	0	0	0	0	0	1	0		
	g	0	0	0	0	0	0	0	1		
	t	0	0	0	0	1	0	0	0		
<i>Solanum lycopersicum</i> SIRAV2	a	0	1	1	0	1					
	c	1	0	0	1	0					
	g	0	0	0	0	0					
	t	0	0	0	0	0					
VSF-1	a	0	0	0	0	0	0	0			
	c	0	1	0	1	1	0	0			
	g	1	0	0	0	0	1	0			
	t	0	0	1	0	0	0	1			
LpWRKY1	a	0	0	0	0	1	0	0			
	c	0	0	0	0	0	1	1			
	g	0	0	0	1	0	0	0			
	t	1	1	1	0	0	0	1			
<i>Solanum melongena</i> SmCP	a	0	1	0	0	0	0				
	c	1	0	1	0	0	0				
	g	0	0	0	1	0	1				
	t	0	0	0	0	1	0				
MYCS	a	0	0	0	0	0	0	0	0	0	0
	c	0	0	0	1	0	0	0	0	0	0
	g	0	0	0	0	0	0	1	0	0	0
	t	1	1	1	0	1	1	0	1	1	1
P1BS	a	0	0	1	0	1	0	0	0		
	c	0	0	0	0	0	0	0	1		
	g	1	0	0	0	0	0	0	0		
	t	0	0	0	1	0	1	0	0		
<i>Solanum tuberosum</i> <i>St-WRKY1</i>	a	0	0	1	0						
	c	0	0	0	1						
	g	0	1	0	0						
	t	1	0	0	0						
StEREBP1	a	1	0	0	1	0	0				
	c	1	1	1	1	1	1				
	g	0	1	1	0	0	0				

	t	0	0	0	0	0	0	0	0
StWhy1	a	0	0	0	1	1	1	1	1
	c	0	0	0	0	0	0	0	0
	g	1	0	1	0	0	0	0	0
	t	0	1	0	0	0	0	0	1
StMYB1R-1	a	1	0	1	0	1	1		
	c	0	0	0	0	0	0		
	G	1	1	0	0	0	0		
	t	0	0	0	1	0	0		

Supplementary table 2. Details of the predicted TFBSs in the promoter regions based on the PWMs having their position and scores.

Putative TFBSs in <i>Capsicum annuum</i>					
CaWRKYb					
Sr. no.	Start	End	Sequence	Score	ln(P)
1.	-365	-362	tatgTGACaaca	3.74	-5.63
2.	-345	-342	tggaTGACatat	3.74	-5.63
3.	-328	-325	agatTGACagea	3.74	-5.63
4.	-280	-277	tatgTGACacaa	3.74	-5.63
5.	-253	-250	ttaaTGACttat	3.74	-5.63
6.	-170	-167	cctgTGACaaaa	3.74	-5.63
CaPF1					
1.	-468	-464	agcaCCAACagga	3.38	-4.68
2.	-381	-377	aagcCCGGCccat	3.7	-6.43
3.	-182	-178	gtgtCCAACttaa	3.38	-4.68
4.	-99	-95	tattCCGTcgtg	3.7	-6.43
5.	-97	-93	tacaCGGACggaa	3.38	-4.68
6.	-65	-61	taacCCGAGtatc	3.38	-4.68
CaERFLP1					
1.	-386	-377	tatgTAAGCCCGGCccat	4.63	-6.29
2.	-381	-372	cattCATGGGCGGgctt	3.49	-5.75
3.	-284	-275	tataTATGTGACACaata	3.17	-4.93
Ca-DREBLP1					
1.	-182	-175	caggTGTCCAACttaa	3.95	-5.59
2.	-180	-173	aagtTGGACACctgtg	3.67	-5.38
3.	-124	-117	aataTAGACGAAgtac	3.02	-4.79
4.	-57	-50	ggttAAGCCACAaatt	3.38	-5.08
Putative TFBSs in <i>Nicotiana benthamiana</i>					
bHLH					
1.	-483	-476	aattTGTCCCCtttt	3.1	-4.78
2.	-387	-380	atatGTAAGCCCggcc	3.71	-5.53
3.	-353	-346	gtcaTCCAGTTGttag	3.06	-4.53
4.	-320	-313	atctTCAGGTCtaac	3.38	-4.87
5.	-244	-237	tttaTATAGTCCaata	3.06	-4.53
6.	-211	-204	tttctACTAGTTgttg	3.06	-4.53
7.	-23	-16	ccacTCTAGCTTggat	3.06	-4.53
WRKY8					
1.	-480	-475	gaatTTGTCCcct	3.05	-4.75
2.	-367	-362	aatgTTGTCAcata	3.05	-4.75
3.	-366	-361	gtatGTGACAacat	3.05	-4.75
4.	-346	-341	ctggATGACAtata	3.05	-4.75
5.	-329	-324	aagaTTGACAgcac	4.52	-6.83
6.	-281	-276	atatGTGACaact	3.05	-4.75
7.	-254	-249	gttaATGACTtatt	3.05	-4.75

8.	-245	-240	ttatTGGACTatat	3.05	-4.75
9.	-222	-217	agagTAGACAtcaa	3.05	-4.75
10.	-180	-175	aaagtTGGACAcctg	3.05	-4.75
11.	-171	-166	acctGTGACAAaag	3.05	-4.75
12.	-170	-165	gcttTTGTCAcagg	3.05	-4.75
13.	-122	-117	aataTAGACGaagt	3.05	-4.75
AP2/ERF					
1.	-387	-381	atatGTAAGCCcggc	3.78	-5.08
2.	-383	-377	atggGCCGGGcttac	4.11	-6.43
3.	-382	-376	taagCCCGGCCcatg	4.11	-6.43
4.	-320	-314	atctTCAGGTCctaa	3.78	-5.08
NbPIF1					
1.	-486	-481	aaaaAAAGGGggac	2.97	-4.42
2.	-485	-480	aaaaAAGGGGgaca	2.97	-4.42
3.	-433	-428	tataTAGGGAtaga	2.97	-4.42
4.	-377	-372	cattCATGGGcggg	2.97	-4.42
5.	-200	-195	tgaaAAAGGAtata	2.97	-4.42
6.	-100	-95	cacgGACGGAatat	2.97	-4.42
7.	-96	-91	tttaCACGGAcgga	2.97	-4.42
8.	-85	-80	aaaaAAAGGGgagca	2.97	-4.42
9.	-84	-79	aaaaAAGGGAgcaa	2.97	-4.42
10.	-6	-1	atcaAAAGGA	2.97	-4.42
Putative TFBSs in <i>Nicotiana tabacum</i>					
bZIP					
1.	-369	-362	tgaaTGTTGTCAcata	4.23	-5.91
2.	-369	-362	tatgTGACAACattca	4.23	-5.91
3.	-332	-325	attgTGCTGTCAatct	4.23	-5.91
4.	-332	-325	agatTGACAGCAaat	4.23	-5.91
5.	-221	-214	gagtAGACATCAaaca	4.23	-5.91
6.	-221	-214	tggtTGATGTCTactc	4.23	-5.91
WRKY					
1.	-479	-475	gaatTTGTCcccc	3.05	-4.75
2.	-367	-363	aatgTTGTCacat	3.05	-4.75
3.	-365	-361	gtatGTGACaaca	3.05	-4.75
4.	-346	-342	ctggATGACatat	3.05	-4.75
5.	-328	-324	aagaTTGACagca	4.52	-6.83
6.	-281	-277	atatGTGACacaa	3.05	-4.75
7.	-254	-250	gttaATGACttat	3.05	-4.75
8.	-245	-241	ttatTGGACTata	3.05	-4.75
9.	-222	-218	agagTAGACatca	3.05	-4.75
10.	-180	-176	aagtTGGACacct	3.05	-4.75
11.	-171	-167	acctGTGACaaaa	3.05	-4.75
12.	-169	-165	gcttTTGTCacag	3.05	-4.75
13.	-121	-117	aataTAGACgaag	3.05	-4.75
JERF					
1.	-56	-50	gttaAGCCACAaatt	3.78	-5.08
NtWRKY12					
1.	-494	-487	ctttTTTTTCATCaaaa	3.9	-5.46
2.	-493	-486	ccftTTTTTCATcaaaa	3.58	-5.26
3.	-482	-475	gaatTTGTCCCCcttt	4.23	-6.48
4.	-464	-457	gataTTTAGCACcaac	3.9	-5.46
5.	-425	-418	ttttTTTTTCTctatc	3.9	-5.46
6.	-407	-400	aagaTTGTTTTCACtgga	3.9	-5.46
7.	-400	-393	tattTTATCCAGtgaa	3.9	-5.46
8.	-205	-198	atccTTTTTTCActagt	5.37	-7.64
9.	-171	-164	tgctTTTGTTCACaggt	3.9	-5.46
10.	-93	-86	ctttTTTACACggac	5.37	-7.64
11.	-91	-84	ccctTTTTTTACacgg	3.58	-5.26
12.	-15	-8	ttttGATTCCACtcta	4.23	-6.48
EREBP/AP2					
1.	-386	-377	tatgTAAGCCCCGGCccat	4.63	-6.29

2.	-381	-372	cattCATGGGCCGGgctt	3.49	-5.75
3.	-284	-275	tataTATGTGACACaata	3.17	-4.93
MYC2					
1.	-372	-365	ccatGAATGTTGtcac	4.23	-5.82
2.	-51	-44	atatGCAATTTGtgc	4.23	-5.82
Putative TFBSs in <i>Petunia hybrida</i>					
MYB.Ph3					
1.	-422	-413	agagAAAAAAAAAATaaag	4	-5.71
2.	-419	-410	gaaaAAAAAAAAATAAagatt	3.43	-5.34
3.	-413	-404	aaaaTAAAGATTGTtcac	4.69	-6.6
4.	-274	-265	aaagAAAATATATTgtgt	4	-5.71
5.	-269	-260	aactAAAAGAAAATatata	4.33	-6.04
6.	-255	-246	tccaATAAGTCATTaact	4.08	-5.78
7.	-213	-204	atcaAACAACATAGTgaaa	4.36	-6.13
8.	-165	-156	gacaAAAGCATAGTgatt	4.36	-6.13
9.	-109	-100	ttaaTAAAAATATTccgt	3.43	-5.34
10.	-105	-96	taaaAATATTCCGTccgt	3.22	-5.19
11.	-86	-77	taaaAAAAGGGAGCaatg	3.22	-5.19
Putative TFBSs in <i>Solanum lycopersicum</i>					
SIRAV2					
1.	-495	-491	ttttCATCAaaat	3.05	-4.75
2.	-469	-465	gcacCAACAggaa	4.52	-6.83
3.	-466	-462	ttagCACCAacag	3.05	-4.75
4.	-369	-365	gtgaCAACAttca	4.52	-6.83
5.	-353	-349	ctaaCAACTggat	3.05	-4.75
6.	-332	-328	ttgaCAGCAcaat	3.05	-4.75
7.	-218	-214	tagaCATCAaaca	3.05	-4.75
8.	-211	-207	caaaCAACTagtg	3.05	-4.75
9.	-183	-179	tgtcCAACTttaa	3.05	-4.75
10.	-54	-50	taagCCACAaatt	3.05	-4.75
VSF-1					
1.	-85	-77	cattGCTCCCTTTtttt	5.33	-7.15
LpWRKY1					
1.	-366	-362	tatgTGACAacat	3.74	-5.63
2.	-345	-341	tggaTGACAtata	3.74	-5.63
3.	-329	-325	agatTGACAgcac	3.74	-5.63
4.	-280	-276	tatgTGACAcfaat	3.74	-5.63
5.	-253	-249	ttaaTGACTtatt	3.74	-5.63
6.	-170	-166	cctgTGACAaaag	3.74	-5.63
Putative TFBSs in <i>Solanum melongena</i>					
SmCP					
1.	-176	-171	tggaCACCTGtgac	4.15	-5.77
2.	-176	-171	gtcaCAGGTGtcca	4.15	-5.77
3.	-131	-126	tataCACGTActtc	4.15	-5.77
4.	-131	-126	gaagTACGTGtata	4.15	-5.77
5.	-65	-60	gataCTCGGGttaa	3.01	-5.55
6.	-65	-60	ttaaCCCAGGtata	3.01	-5.55
MYCS					
1.	-474	-465	acaaATTCCTGTTGgtgc	5.78	-8.28
2.	-423	-414	tttaTTTTTTTTTcteta	3.33	-5.23
3.	-419	-410	aateTTTATTTTTtttc	3.33	-5.23
4.	-267	-258	atatTTTCTTTTAGttaa	5.45	-7.43
5.	-253	-244	ttaaTGACTTATTGgact	3.98	-5.56
6.	-218	-209	ctagTTGTTTGATGtcta	3.98	-5.56
7.	-211	-202	tttTCACTAGTTGttg	4.31	-6.53
8.	-188	-179	tataTTTAAAGTTGgaca	3.98	-5.56
P1BS					

1.	-459	-452	tgctAAATATCCtata	3.5	-5.13
2.	-459	-452	tataGGATATTTtagca	3.5	-5.13
3.	-197	-190	aaaaGGATATATattt	3.5	-5.13
4.	-197	-190	aatATATATCCttt	3.5	-5.13
5.	-138	-131	atatATATATACagct	3.5	-5.13
6.	-138	-131	acgtGTATATATat	3.5	-5.13
7.	-106	-99	ataaAAATATTCgctc	3.5	-5.13
8.	-106	-99	gacgGAATATTTttat	3.5	-5.13
9.	-45	-38	aattGCATATATataa	3.5	-5.13
10.	-45	-38	ttatATATATGCaatt	3.5	-5.13
Putative TFBSs in <i>Solanum tuberosum</i>					
<i>St-WRKY1</i>					
1.	-365	-362	tatgTGACaaca	3.74	-5.63
2.	-345	-342	tggaTGACat	3.74	-5.63
3.	-328	-325	agatTGACagca	3.74	-5.63
4.	-280	-277	tatgTGACaaca	3.74	-5.63
5.	-253	-250	ttaaTGACttat	3.74	-5.63
6.	-170	-167	cctgTGACaaaa	3.74	-5.63
<i>StEREBP1</i>					
1.	-483	-479	ttgtCCCCttt	3.47	-5.97
2.	-384	-380	tgtaAGCCCggcc	3.14	-4.58
3.	-380	-376	agccCGGCCatg	3.47	-5.97
4.	-97	-93	tacaCGGACggaa	3.14	-4.58
5.	-65	-61	taacCCGAGt	3.14	-4.58
6.	-63	-59	cttaACCCGagta	3.14	-4.58
<i>StWhy1</i>					
1.	-499	-492	tttcATCAAAATt	4.27	-6.21
2.	-479	-472	ggggGACAAATcctg	3.13	-4.92
3.	-370	-363	atgtGACAACATtcat	3.13	-4.92
4.	-365	-358	tggtGTCACATAactaa	3.13	-4.92
5.	-328	-321	tgctGTCAATCTtcag	3.13	-4.92
6.	-316	-309	tcagGTCCTAACcagt	3.13	-4.92
7.	-284	-277	ttgtGTCACATAtata	3.13	-4.92
8.	-279	-272	atgtGACACAATat	3.13	-4.92
9.	-257	-250	ataaGTCATTAActaa	3.13	-4.92
10.	-248	-241	tataGTCCAATAagtc	3.13	-4.92
11.	-205	-198	actaGTGAAAAAggat	4.27	-6.21
12.	-183	-176	aggtGTCCAACttaa	3.13	-4.92
13.	-174	-167	tttGTCACAGGtgc	3.13	-4.92
14.	-169	-162	ctgtGACAAAAGcata	4.6	-6.7
15.	-121	-114	cttcGTCTATATttaa	3.13	-4.92
16.	-91	-84	ccgtGTAAAAAAaggg	4.27	-6.21
17.	-55	-48	ttaaGCCACAAAttgc	3.13	-4.92
18.	-10	-3	tggaATCAAAAGga	4.27	-6.21
<i>StMYB1R-1</i>					
1.	-398	-393	cactGGATAAaata	4.19	-6.42