Table 1 Suppl. The *WRKY* transcription factor family in hemp. L - length [bp], Mr - molecular mass [Da], iP - isoelectric point, Dr - drought.

Gene	Gene Model	Deduced polypeptide			Conserved	Domain pattern	Zinc	Stress response				Group
	ID	L	Mr	iP	motif		finger	Dr	NaCl	Cd	ABA	
CsWRKY1	PK00408.1	914	98860	7.26	WRKYGQK/ WRKYGQK	C-X4-C-X22-H-X-H(N) C-X4-C-X23-H-X-H(C)	C2H2					I
CsWRKY2	PK00408.2	727	78004	6.15	WRKYGQK/ WRKYGQK	C-X4-C-X22-H-X-H(N) C-X4-C-X23-H-X-H(C)	C2H2					-
CsWRKY3	PK03324.1	318	36162	7.16	WRKYGQK	C-X7-C-X21-H-X-C	C2HC					III
CsWRKY4	PK04475.1	425	48089	6.67	WRKYGQK	C-X4-C-X23-H-X-H	C2H2		up	up	down	IIc
CsWRKY5	PK05432.1	511	55688	8.30	WRKYGQK/ WRKYGQK	C-X4-C-X22-H-X-H(N) C-X4-C-X23-H-X-H(C)	C2H2	up	down	up	up	I
CsWRKY6	PK06890.1	330	35569	6.63	WRKYGQK	C-X5-C-X23-H-X-H	C2H2	up	down		down	IIe
CsWRKY7	PK07646.1	210	23963	9.62	WRKYGQK	C-X4-C-X23-H-X-H	C2H2	up	up	up	up	IIc
CsWRKY8	PK07706.2	595	64782	7.25	WRKYGQK	C-X5-C-X23-H-X-H	C2H2	up	up	up	up	IIb
CsWRKY9	PK08266.1	221	25354	4.60	-	-	-					-
CsWRKY10	PK08451.1	326	36193	8.78	WRKYGQK	C-X5-C-X23-H-X-H	C2H2	up	down	down	up	IIa
CsWRKY11	PK08776.1	562	61087	6.83	WRKYGQK/ WRKYGQK	C-X4-C-X22-H-X-H(N) C-X4-C-X23-H-X-H(C)	C2H2	up				I
CsWRKY12	PK09209.1	337	36717	7.61	WRKYGQK	C-X5-C-X23-H-X-H	C2H2					IIe
CsWRKY13	PK09975.1	155	18041	9.26	WRKYGQK	C-X4-C-X23-H-X-H	C2H2					IIc
CsWRKY14	PK10616.1	345	38793	6.23	WRKYGQK	C-X7-C-X23-H-X-C	C2HC					III
CsWRKY15	PK10734.1	284	31205	8.82	WRKYGQK	C-X4-C-X23-H-X-H	C2H2	up	down	down		IIc

CsWRKY16	PK10836.7	596	65905	5.70	WRKYGQK	C-X5-C-X23-H-X-H	C2H2				IIb
CsWRKY17	PK11028.1	144	16089	9.88	WRKYGQK	C-X5-C-X23-H-X-H	C2H2				IIe
CsWRKY18	PK11867.1	437	48068	8.89	WRKYGQK/ WRKYGQK	C-X4-C-X22-H-X-H(N) C-X4-C-X23-H-X-H(C)	C2H2				-
CsWRKY19	PK11867.2	437	48068	8.89	WRKYGQK/ WRKYGQK	C-X4-C-X22-H-X-H(N) C-X4-C-X23-H-X-H(C)	C2H2				I
CsWRKY20	PK12811.1	391	42710	10.4	WRKYGQK	C-X5-C-X23-H-X-H	C2H2	up	down		IId
CsWRKY21	PK12935.1	124	14050	11.2	WRKYGQK	C-X5-C-X23-H-X-H	C2H2	up		down	IIe
CsWRKY22	PK14075.1	299	33021	10.6	WRKYGQK	C-X5-C-X23-H-X-H	C2H2	up		down	IId
CsWRKY23	PK14983.1	372	41990	10.3	WRKYGQK	C-X5-C-X23-H-X-H	C2H2	up		up	IId
CsWRKY24	PK15688.1	268	30457	9.10	WRKYGQK	C-X4-C-X23-H-X-H	C2H2	up	down	down	IIc
CsWRKY25	PK16035.1	341	37772	9.15	CRKYGQK/ WRKYGQK	C-X4-C-X22-H-X-H(N) C-X4-C-X23-H-X-H(C)	C2H2				I
CsWRKY26	PK16035.2	90	10239	10.2	WRKYGQK	C-X4-C-X22-H-X-H	C2H2				-
CsWRKY27	PK16045.1	506	56788	7.95	WRKYGQK/ WRKYGQK	C-X4-C-X22-H-X-H(N) C-X4-C-X23-H-X-H(C)	C2H2				I
CsWRKY28	PK16897.4	417	46433	6.51	WRKYGQK	C-X4-C-X23-H-X-H	C2H2	up	down	up	IIc
CsWRKY29	PK17638.1	592	65445	7.06	WRKYGQK	C-X5-C-X23-H-X-H	C2H2				IIb
CsWRKY30	PK19604.1	168	19219	8.81	WRKYGQK	C-X4-C-X23-H-X-H	C2H2				IIc
CsWRKY31	PK20163.1	141	16150	9.61	WRKYGQK	C-X5-C-X23-H-X-H	C2H2	up	up	up	up	IIa

CsWRKY32	PK20695.1	455	49914	7.60	WRKYGQK/ WRKYGQK	C-X4-C-X22-H-X-H(N) C-X4-C-X23-H-X-H(C)	C2H2	up				I
CsWRKY33	PK20698.1	119	13434	9.95	WRKYGQK	C-X5-C-X24	-					-
CsWRKY34	PK20894.1	124	14535	10.2	WRKYGQK	C-X4-C-X23-H-X-H	C2H2	up	up	up	up	IIc
CsWRKY35	PK21041.1	517	56569	8.12	WRKYGQK/ WRKYGQK	C-X4-C-X22-H-X-H(N) C-X4-C-X23-H-X-H(C)	C2H2	up			up	I
CsWRKY36	PK21300.1	323	35616	10.6	WRKYGQK	C-X5-C-X19	-					-
CsWRKY37	PK21378.1	353	39382	6.65	WRKYGQK	C-X7-C-X23-H-X-C	C2HC	up	up	down	up	III
CsWRKY38	PK21971.1	274	30048	7.34	WRKYGQK	C-X7-C-X23-H-X-C	C2HC					III
CsWRKY39	PK23889.1	131	15274	9.68	WRKYGQK	C-X4-C-X24	-					-
CsWRKY40	PK24436.1	642	69866	6.34	WRKYGQK	C-X5-C-X23-H-X-H	C2H2					IIb
CsWRKY41	PK25870.1	129	14878	9.49	WRKYGKK	C-X4-C-X23-H-X-H	C2H2	up				IIc
CsWRKY42	PK25933.1	84	9624	10.5	WRKYGQK	C-X4-C-X13	-					-
CsWRKY43	PK26499.1	501	55005	7.00	WRKYGQK/ WRKYGQK	C-X4-C-X22-H-X-H(N) C-X4-C-X23-H-X-H(C)	C2H2			down		I
CsWRKY44	PK26982.1	333	36806	5.96	WRKYGQK	C-X4-C-X23-H-X-H	C2H2	up				IIc
CsWRKY45	PK27953.1	168	19720	9.70	WRKYGQK	C-X4-C-X23-H-X-H	C2H2	up	up	up	down	IIc
CsWRKY46	PK28616.1	159	18476	9.33	WRKYGQK	-	-					-
CsWRKY47	PK29640.1	129	14735	8.68	WRKYGKK	C-X4-C-X23-H-X-H	C2H2	up	up	up	up	IIc
CsWRKY48	PK29664.1	470	49828	8.84	WRKYGQK	C-X5-C-X23-H-X-H	C2H2	up	down	down	down	IIb
CsWRKY49	PK29806.1	158	17813	8.45	WRKYGQK	C-X5-C-X23-H-X-H	C2H2					IIe

Table 2 Suppl. Primers used for real time quantitative PCR analyses.

Gene name	Forward primer (5'-3')	Reverse primer (5'-3')
CsACTIN	CCAATAGCCTTGCATTCCAT	TCGATTGGAAAGCCGAATAC
CsWRKY1	GTTCCTGCTGCTCGGAATAG	CCAAACCTGCTTGGTTCATT
CsWRKY3	CTGCTGCTGATGCAACTGAT	TGTAAGAGCCTCTGCGATCC
CsWRKY4	GCTGGGACATTATCGCCTAA	ATGAAGCTGCTGCCGATATT
CsWRKY5	CCACGAAATGCCTCAATCTT	TACAAGAACGCCTTGTGCAG
CsWRKY6	CGGGCATCAAGAGAAGAAAG	AGCCCCTTGGATAAGGAGAA
CsWRKY7	TATTGGATTCTTGGGGCTGA	GGCTTCTGGTCTGAAAAGCA
CsWRKY8	GGCTCCATTCCCTACAGTCA	GCTGAAGGCCTGAAAACTTG
CsWRKY10	AGCTGCCCTGTCAAAAAGAA	CAAGGAACCGAACTGAGAGC
CsWRKY11	GTCCCTGCTGCGAGAAATAG	TCAGATTGCGCAGTAGGATG
CsWRKY12	AAAGCAACCTCACCACCAAC	GGATATGGGGAGCCTTTGAT
CsWRKY13	TGGGATCAAAAATGGGAAGA	TTCTTCACATTGCAGCCTTG
CsWRKY14	GGTACCATTGGGAACAGGTG	TCCTGATCCGATCTTTGGAC
CsWRKY15	TTGCGTTCATGACAAAGAGC	AACGGGACATGGATGAGTGT
CsWRKY16	CACCCCACAATTCCCATTAC	ATTCTCGGCCATAGATGTCG
CsWRKY17	TCCATCTTCTCCACCCTCAC	TGTTGTTCGCTGTCTTCTGG
CsWRKY19	GGGCAGATTGCTGAAATTGT	TCCAACTTCCCCTTCACAAC
CsWRKY20	TCGCACAATCTCAGAAGCAG	TGCAGGAGTCAAGAACATCG
CsWRKY21	TGCCATGTAACGGCTGATAA	GAGTACTTCCGGCGAGTGAG
CsWRKY22	CGTGCAAGAGACGATTCAAA	GACCGACCTTCCATCGTAGA
CsWRKY23	AACAACAGCAGCTGCAACAC	GGCCACACTTCCATCCATAC
CsWRKY24	TCGATGTGCTTGATGATGGT	CTCCCCTCGTATGTCGTGAT
CsWRKY25	ACTGCTCAGTTGGGCCTAGA	TGCTGCTGATGATCCAACTC
CsWRKY27	ATCGAAATTCGCCTTCCTTT	CTCGGGTTTGGATTTCCTTT
CsWRKY28	TCGCCATTCTTTGATTTTCC	GGCGTTGCAGGTTGATTATT
CsWRKY29	ACGATGAACGATGGATGTCA	GGAAGTGGGTGGTTGTGACT
CsWRKY30	GAATTCTGGGTTGGGGTTTT	CCTCCACCATGAATTTCCAC
CsWRKY31	TTTTGCACCAAATTGTCCAG	TGAAGAAGCCATTTGGTTGA
CsWRKY32	AACCTGATGCCAAAAGATGG	GCTCCTAGGATTGGGGTTTC
CsWRKY34	TGACGATGGTTACAGGTGGA	ATTGCATCTGCCTGAGGAGT
CsWRKY35	CTCCAACACGGCCATAGAAT	TACCTGACTCCCCATTTTGC
CsWRKY37	AGGTCAACCCTCATGACCAG	TGGCCATACTTTCTCCAAGC
CsWRKY38	AGAAAGAGGTGGACGAAGCA	CTTTGTGGCCAAACATCCTT
CsWRKY40	AGAAGGAAGTCAACCGAGCA	AAACTCGAGCCTTTCGCATA
CsWRKY41	ATAGCCCAAATCCCAGGAAC	TTGGAGCCATAAGAGGCATT
CsWRKY43	CGAGACGGCACTAGACAACA	TTGGGGTTGCGTCTAATTTC
CsWRKY44	GTGGAATCCTGGCTCATCAT	AGTCGCCAGCTACACTGGTT

CsWRKY45	ATGGGTTTTTGGGATTAGGG	CAGCCTTCTGGCCATACTTC
CsWRKY47	CTTGGTGGACACAACACTGG	TTCTTGGATTTGGGCTGTTC
CsWRKY48	ACGATGAACGATGGATGTCA	AGACAGGAAGTGGGTGGTTG
CsWRKY49	TGGGCATGGAGAAAATATGG	GGGAACTTGGTTCGGGTACT