Table 1Suppl.Primers for reverse transcription quantitative PCR analysis and construction of yeast expression vectors; the underlined sequences are restrictionenzymes.

Gene name	Forward primer	Reverse primer
JrWRKY6	5’-GATGAGAACTCGTTGTCT-3’	5’-ATCTGGGAACCTTATTAG-3’
JrWRKY53	5’-GTACAACATCGTCATCAC-3’	5’-TTGAGATATCGTCAGTGC-3’
18SrRNA	5′-GGTCAATCTTCTCGTTCCCTT-3′	5’-TCGCATTTCGCTACGTTCTT-3’
JrWRKY6-JM	5’-ATCGGGTACCATGGATCTTCGGCTGGCTAC-3’	5’-CGATTCTAGATTAATTGCCTTGCAAACTTG-3’
JrWRKY53-JM	5’-ATCGGGTACCATGGAGAACGGTTGGAGCTG-3’	5’-ATCGGGTACCCTAAGCGAAAAACGCTGAAG-3’
pHIS2-W-box	5’-AATTCTTGACCTTGACCTTGACCGAGCT-3’	5’-CGGTCAAGGTCAAGGTCAAG-3’
pHIS2	5’-GCCTTCGTTTATCTTGCCTGCTC-3’	CGATCGGTGCGGGCCTCTTC-3’
pGAD-JrWRKY6	5’-TGGCCATTATGGCCCGGGATGGATCTTCGGCTGGCTAC-3’	5’-GACATGTTTTTTCCCGGGTTAATTGCCTTGCAAACTTG-3’
pGAD-JrWRKY53	5’-TGGCCATTATGGCCCGGGATGGAGAACGGTTGGAGCTG-3’	5’-GACATGTTTTTTCCCGGGTAAGCGAAAAACGCTGAAG-3’
pGAD	5’-CTATTCGATGATGAAGATACCCCACCAAACCC-3’	5’-GTGAACTTGCGGGGTTTTTCAGTATCTACG-3’
pROKII	5’-TTTCATTTGGAGAGAACACG-3’	5’-TGCCAAATGTTTGAACGATC-3’
pROKII-JrWRKY6	5’-ATCGGGATCCATGGATCTTCGGCTGGCTAC-3’	5’-CGATGGTACCCTTAATTGCCTTGCAAACTTG-3’
pROKII-JrWRKY53	5’-ATCGGGATCCATGGAGAACGGTTGGAGCTG-3’	5’-CGATGGTACCTAAGCGAAAAACGCTGAAG-3’
pCAM-W-box	5’-AGCTTTTGACCTTGACCTTGACCACCCTTCCTCTATATAAGGA AGTTCATTTCATTTGGAGAGAACACGGC-3’	5’-CATGGCCGTGTTCTCTCCAAATGAAATGAACTTCCTTATATA GAGGAAGGGTGGTCAAGGTCAAGGTCAAA-3’
pCAMBIA1301	5’-TAGAGTCGACCTGCAGGCAT-3’	5’-ATCATCATCATAGACACACG-3’

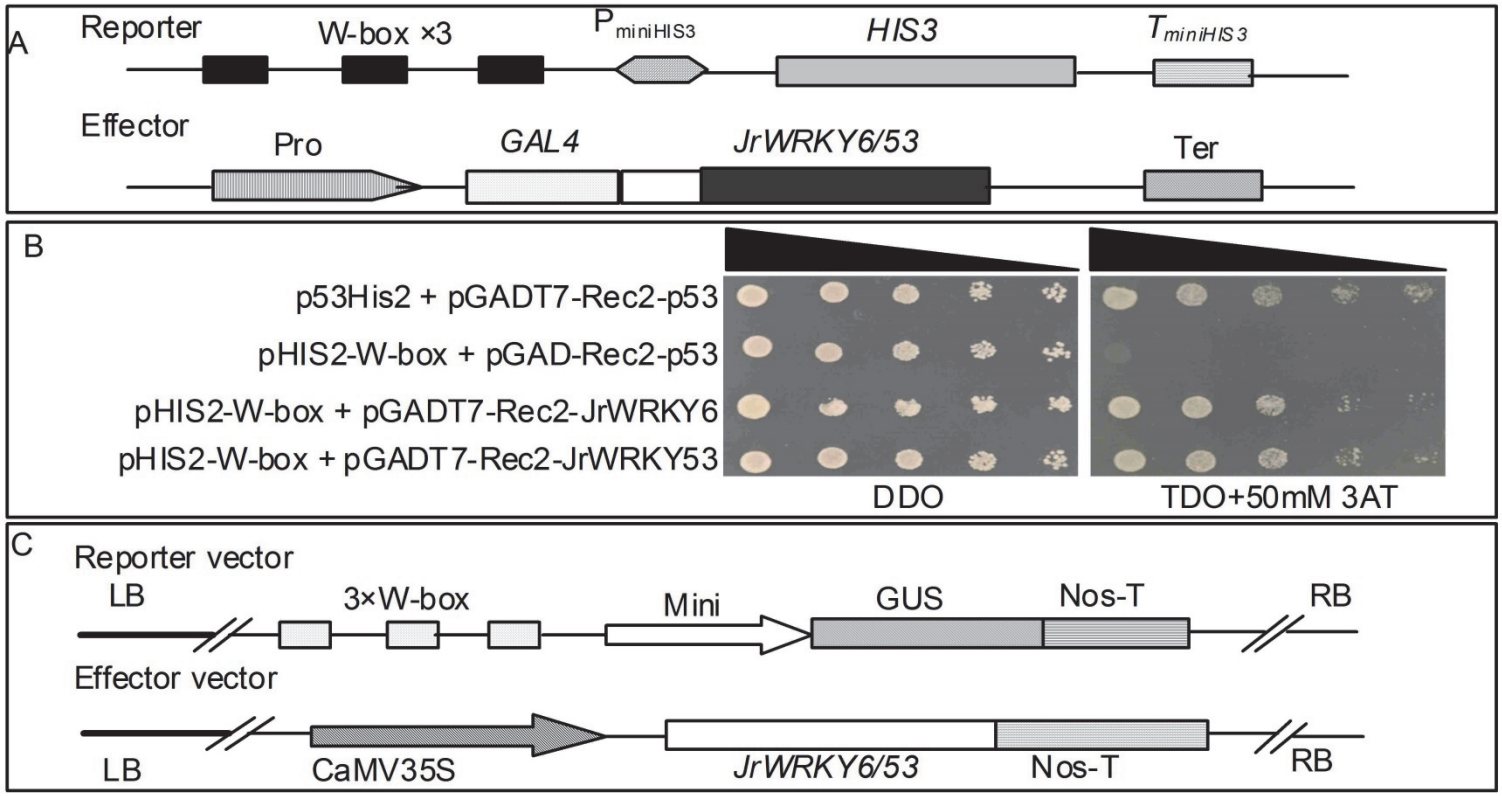

Fig. 1Suppl. The binding analysis of JrWRKY6 and JrWRKY53 to the W-box motif. *A* -A diagram of reporter and effector vectors. Three tandem copies of the W-box were inserted into the pHIS2 vector as the reporter construct.The coding DNA sequences (CDSs) of *JrWRKY6* and *JrWRKY53* were cloned into pGADT7-Rec2 as the effector constructs. *B* - The effector and reporter constructs were co-transformed into the yeast strain Y187. Positive transformants were further identified by spotting serial dilutions (1:1, 1:10, 1:100, 1:1000, and 1:10000) of yeast onto a DDO (SD/-Leu/-Trp, SD means the Synthetic Dropout Medium)) plate and TDO (SD/-His/-Leu/-Trp) with 50 mM 3-AT plate. p53His2 + pGADT7-Rec2-p53 was used as a positive control, whereas the pHIS2-W-box + pGAD-Rec2-p53 was used as a negative control.*C* -A diagram of the reporters and effectors. Triple tandem copies of the W-box were fused with the 35SCaMV-46 minimal promoter and cloned into pCAMBIA1301 for driving the β-glucuronidase (*GUS*) gene as the reporter construct. The CDS of *JrWRKY6* and *JrWRKY53* were cloned into into pROKII under control of the 35S promoter as the effector constructs.

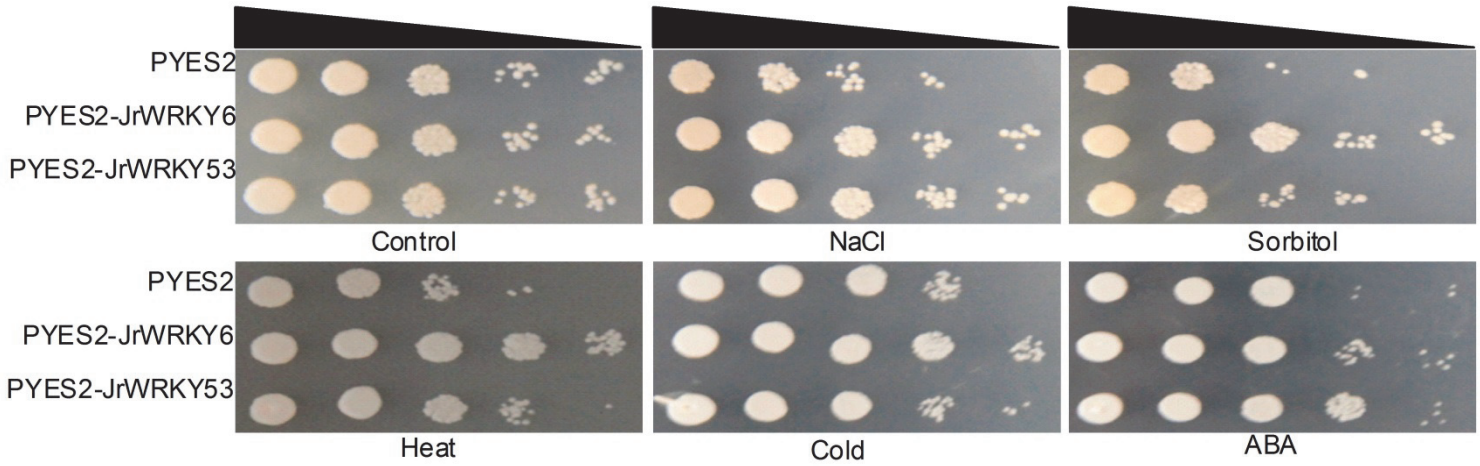

Fig. 2 Suppl. The abiotic stress tolerance analysis of *JrWRKY6* and *JrWRKY53* in a yeast expression system compared with the empty pYES2 (control) yeast. The two yeast cultures were independently grown in a synthetic complete (SC)-Ura liquid medium containing 2% (m/v) galactose at 30°C for 20 h up to A_{600}=0.4, then collected and adjusted the yeast with SC-Ura including 2% galactose and cultivated up to A_{600}=1.6 for stress analysis. The same number of cells were resuspended in 1 cm^3 of 0.3 M NaCl, 0.3 M sorbitol,100 µM ABA, and treatments at 10 °Cfor 24 h, and 44°Cfor 1 h. Then, serial dilutions (10^0, 10^1, 10^2, 10^3, 10^4) were spotted onto SC-Ura agar plates and incubated at 30°C for 60 h. As a control, yeast with A_{600}=1.6 without any stress was also spotted onto Sc-Ura agar plates with the same dilutions as the treatments and grown at 30°C for 40 h.

JrWRKY6

ATGGATCTTCGGCTGGCTACTAATGGTGATGCGGATGAGAACTCGTTGTCTTCGTCGGAAGGAAATGGCCGGGACCGGTCTGGATCGCCCGCAATTAAGGGA
GAAGTCATGGGGTCGAAGCAGCAGTTTGGGCTGGGGAAGGATGGGAATAGTGATGAGGTGCTTGCTTTCGATCAGGATAAGAAGGAACATGGTAGTAAAATT
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JrWRKY53

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TGAAGGAGTAATGGCAGGTGTACCCGGGTCTCCAATTTCTGTCAACGGAAGTCTCGGGACCGATGAATTTGACAAGGGTATCAAGGATCATCAGGGCACTGA
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GAGAAAATATGGTCAGAAAGACATCCTAGGAGCCAAATATCCCAGAAGCTACTATAGATGCACATTGCGTAACTCTCAAAACTGCTGGGCGACAAAGCAAGT
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AAAGCAAGAACAGAAACAAAACTTCAACAACAATGACAATCAGCAAGATCAACGACCACTTGATATCCTCGGAAACATTGGAAGCAGTTTGAGGATTGTTA
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JrWRKY6

MDLRLATNGDADENSLSSSEGNGRDRSGSPAIKGEVMGSKQQFGLGKDGNSDEVLAFDQDKKEHGSKIGREDSPDQTSQGWGPNKVPRFNSPKDVDQTEATMRK

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JrWRKY53
MENGWSWEQKPLIGELIQGMELVKQLRVQFSTTSSSPETVETLLQRILASYEKALMILRWSGSIGQPQIEGVMAGVPGSPISVNGSLGTDEFDKGIKDHQGTDDISK
KRKILPRWTDHVRVRSENGMEGPHEDGYSWRKYGQKDILGAKYPRSYYRCTLRNSQNCWATKQVQRSDDDPNAFDITYRGRHTCSHATNLVPAPSSPEKQEQKQ
NFNNNDNQQDQRPLDILGNIGSSLRIVTEELENKEMSYPFSFPSTSFGCTKSENSNFSLSTLDNNTSFLGSFSPPFLSPATPESNFHSVSPFQNSNFKGAHNGHRSESDL
TEIISANTSATSSPILDLDFSLDPAEIGHFPFDSSAFFA*

Fig.3.Suppl. JrWRKY6 and JrWRKY53 nucleic acid and protein sequences.Sequences marked by *yellow and a frame* are WRKY domains.