```
1    ATGGATTCTGGTAAGAGCTGGGAGCAGAAGTCACTGGTCAATGAGATCATTGAAGGAATGGAGCTAGCAAAACAGTTGAGGCTATGTCTAAATGCAAAATCGTCAGCAGACACCAAGCAA
1     M  D  S  G  K  S  W  E  Q  K  S  L  V  N  E  I  I  E  G  M  E  L  A  K  Q  L  R  L  C  L  N  A  K  S  S  A  D  T  K  Q

121  TTTTTAGTGCAGAGGATACTGTCGTCATATGAGAAGGCCCTTCTGATGCTGAAATGTGGCGGTTCGCCACAAAGTCCTATCAGAGCAATTGCTAGCGCGCCGGAGTCGCTAATGTCAGCC
41    F  L  V  Q  R  I  L  S  S  Y  E  K  A  L  L  M  L  K  C  G  G  S  P  Q  S  P  I  R  A  I  A  S  A  P  E  S  L  M  S  A

241  AATGAAGGTCCTTGTTGCGTTGACAATAACAGAAGTCTCCAGGATCATCAGGACCTGACGGCGGTCTCCAAGAAAAGAAAGGAAATGGCCAAATGGACAGAACACGTCACGAGAGTAATC
81    N  E  G  P  C  C  V  D  N  N  R  S  L  Q  D  H  Q  D  L  T  A  V  S  K  K  R  K  E  M  A  K  W  T  E  H  V  T  R  V  I

361  TCTGAGAATGGGATTGAAGGACCCCATGAAGATGGCCACAGCTGGAGAAAATATGGGCAGAAAGACATCCTAGGAGCCAAACATCCAAGAAGCTATTACAGATGCACGTACCGGAACACG
121   S  E  N  G  I  E  G  P  H  E  D  G  H  S  W  R  K  Y  G  Q  K  D  I  L  G  A  K  H  P  R  S  Y  Y  R  C  T  Y  R  N  T

481  CAAAGTTGTTGGGCTACANNGCAAGTGCAAAGATCAGATGAAGACCCCACCGTCTTCGAAATCACATACAAAGGGAAGCATACATGTTCTCATGGCGGCAGTTCAGTTCCACCGCCACCA
161   Q  S  C  W  A  T  X  Q  V  Q  R  S  D  E  D  P  T  V  F  E  I  T  Y  K  G  K  H  T  C  S  H  G  G  S  S  V  P  P  P  P

601  TCACCAGAAAAGCAAGAACGAAAACGACACAATCATAACAATACTTATCAACAACAGCAGTCTCAAGGAAACCAAATGAGCTTCCCAACTAATCTGAGAGTCAATACTGAGAACTTAGAC
201   S  P  E  K  Q  E  R  K  R  H  N  H  N  N  T  Y  Q  Q  Q  Q  S  Q  G  N  Q  M  S  F  P  T  N  L  R  V  N  T  E  N  L  D

721  GACAGAGAGAACACAGCATCTCCATTCTCTTTTACTTCATCTCCATTCGGAAGTATCAGCGATGACGCCTTCCTATCTTCGATGCTTGATGATCAAAGTCTTTTTGACCATTTCAATCAA
241   D  R  E  N  T  A  S  P  F  S  F  T  S  S  P  F  G  S  I  S  D  D  A  F  L  S  S  M  L  D  D  Q  S  L  F  D  H  F  N  Q

841  TCATTGCTGTCTCCAGCCGCAGGCGGATCAAACTATTACTTTGAGCTGCCCAGCCAGATGAGAAACATTGCAGGAAATGAGCAACGTTCGGAATCTGATATCATCTCAGCCAACAATTCG
281   S  L  L  S  P  A  A  G  G  S  N  Y  Y  F  E  L  P  S  Q  M  R  N  I  A  G  N  E  Q  R  S  E  S  D  I  I  S  A  N  N  S

961  TCAACCAATTCTCCGATCCCGGACATGGATTTTCCACTGGAGCCAGTGGAACTCGACCCCTATTTCCCATTTGACTCCCCAGGATTTTTCTTATAA
341   S  T  N  S  P  I  P  D  M  D  F  P  L  E  P  V  E  L  D  P  Y  F  P  F  D  S  P  G  F  F  L  *
```

Figure S1: Gene sequences and aa sequences of *MbWRKY53*. The black underline represents the start codon and the stop codon; the conserved amino acid sequence unique to WRKY is shown in red; the yellow parts are the C2H2 zinc finger motif of WRKY.

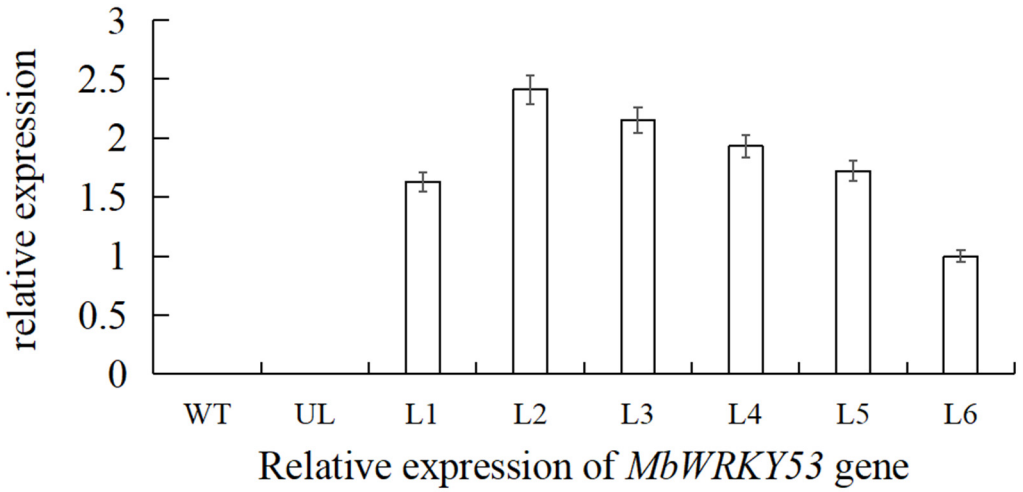


Figure S2: Relative expression levels of *MbWRKY53* gene in transgenic *Arabidopsis*. L1-L6 were the 6 selected transgenic lines.

Table S1 Primers used in this study.

Primer	Sequence (5'-3')
MbWRKY53-F	ATGGATTCTGGTAAGAGCTGG
MbWRKY53-R	TTATAAGAAAAATCCTGGGG
MbWRKY53-2F	GAGCTCGGTACCCGGGGATCCATGGATTCTGGTAAGAGCTGG
MbWRKY53-2R	TCTAGAGGATCCCCGGGTACCTTTATAAGAAAAATCCTGGGG
MbWRKY53-qF	TGTGAGATTAGGGATGAAA
MbWRKY53-qR	TTTCATCCCTAATCTCACA
AtSOS1-F	CTGCTTGCTACATTTCTGC
AtSOS1-R	TGCTTCCTCTCCTTCCTT
AtDREB2A-F	TGGAGAATGGTGCGGAAGA
AtDREB2A-R	CTCCACTCTGATCATAAACTGCCAT

AtRAB18-F	GCTTGCGATTTGGGATACAG
AtRAB18-R	CCAGACGAACCTTCAGCAGT
AtP5CS1-F	GATACGGATATGGCAAAGCG
AtP5CS1-R	CCAAGTCCAAATCGGAAACC
AtCOR6.6-F	ACAGGCGGGAAAGAGTAT
AtCOR6.6-R	TGGAAGGCATTCTTGTTG
AtRD29b-F	CAACGAGGGGAAGATAAAAGTGT
AtRD29b-R	AGCCAGATGATTTTGGAGCCT

Table S2 The PCR reaction system.

Components	Volume
cDNA	1.5 μL
MbWRKY75-F	1.0μL
MbWRKY75-R	1.0 μL
2×Easy Taq® PCR SuperMix	12.5 μL
dd H_2O	9.0 μL
Total Volume	25 μL

Table S3 PCR reaction conditions.

Step	Temperature	Time
Pre-denaturation	97℃	5 s
Denaturation	97℃	5 s
Anneal	55-65℃	10 s
Extend	72℃	20 s

Table S4 The RT-PCR reaction system.

Component	Volume
Primer-qF	2.0 μL
Primer-qR	2.0 μL
5×BlazeTaq qPCR Mix[a]	4.0 μL
cDNA	2.0 μL
dd H2O	10.0μL
Total Volume	20.0 μL

Table S5 RT-qPCR reaction conditions.

Step	Temperature	Time
Pre-denaturation	95℃	30 s
Denaturation	72℃	10 s
Annealing and elongation	55℃	30 s