

Figure S1. Drought stress sensitive phenotypes of two rice *onac054* mutants. (**A**, **B**) Changes in the ion leakage rate (**A**) and fresh shoot weight (**B**) of Dongjin (wild type; WT), *onac054-1*, and *onac054-2* seedlings during 5 days of dehydration stress. Data represent the mean \pm standard deviation (SD; $n = 6$ samples). Asterisks (** $P < 0.01$) indicate significant differences between the WT and other genotypes.

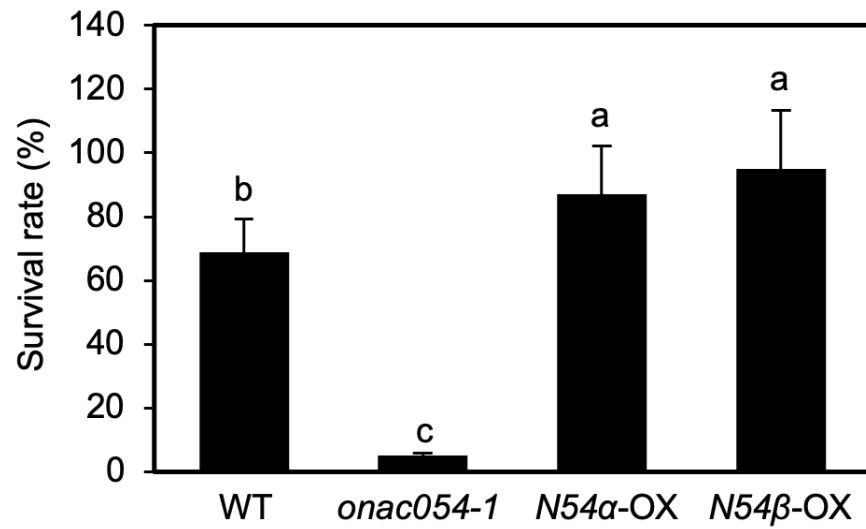


Figure S2. Survival rate of wild type (WT), *onac054-1*, and *ONAC054-OX* seedlings after dehydration. WT, *onac054-1*, *ONAC054α-OX* (*N054α-OX*), and *ONAC054β-OX* (*N054β-OX*) seedlings were grown in soil under normal growth conditions for 14 days, and then subjected to dehydration for 5 days. Subsequently, the seedlings were rehydrated for 3 days, and their survival rate was determined. Data represent the mean \pm SD of four independent experiments, with each experiment containing approximately 20 seedlings of each genotype. Different lowercase letters above the bars indicate significant differences ($P < 0.05$; Tukey's multiple comparison test).

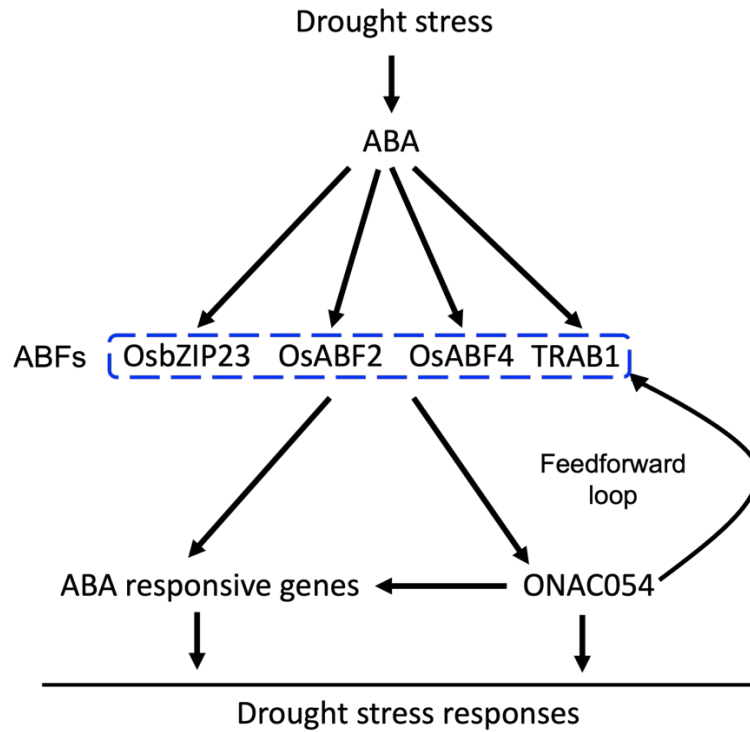


Figure S3. Model depicting the ONAC054-mediated drought stress responses in rice. Under drought stress conditions, the ABFs including OsbZIP23, OsABF2, OsABF4, and TRAB1 are induced as the accumulation of ABA increases. These ABFs directly activate the expression of *ONAC054*. On the other hand, ONAC054 also directly activates *TRAB1* expression and indirectly activates other *ABF* genes, thereby forming coherent feedforward loops to activate ABA and drought stress responses.

Table S1. Primers used in this study.

Gene	Forward primer (5'→3')	Reverse primer (5'→3')
For cDNA cloning		
<i>TRAB1</i>	AAAGGATCCATGAACATGGACGAG CT	AAAAGGCCTTTACCAGGGACCTGTC A
<i>OsZIP23</i>	AAAGGATCCATGGATTTTCCGGGAG G	AAAAGGCCTTCACCATGGACCCGTC A
<i>OsABF2</i>	AAAGGATCCATGGAGTTGCCGGCGG AT	AAAAGGCCTTCAGCATGGACCAGTC A
<i>OsABF4</i>	AAAGGATCCATGCTGACGGATAGGT G	AAAAGGCCTTCACCAGGGACCAGTC AG
<i>OsABI5</i>	AAAGGATCCATGGCATCGGAGATGA G	AAAAGGCCTTCACCACATGCAGCTG CC
For cloning of promoter regions		
<i>TRAB1</i> promoter	AAACTGCAGGGCCTCATCTTTTTAT GC	AAAGTCGACCCCTCCCAGCGTGCTC TG
<i>ONAC054</i> promoter	AAACTGCAGTCATTGCATACCTAGC TA	AAAGTCGACATGCTTCCTCTAGCCT T
For ChIP-qPCR		
pro <i>TRAB1</i> -a	GGCCTCATCTTTTTATGCTTAT	TTGACATTAATATGAATGTAGGAA
pro <i>TRAB1</i> -b	CTACATTCATATTAATGTCAAT	CGCTATCCATCTGCTGGCAGAT
pro <i>TRAB1</i> -c	TCTGCCAGCAGATGGATAGCT	ACCTGGCTCCATTTGTTCAAG
pro <i>TRAB1</i> -d	CTTGAACAAATCCAGCCAGGT	CTACTGTTGAGTGACTCGCAGG
pro <i>TRAB1</i> -e	ACCTGCGAGTCACTCAACAG	GTGGTGGTGGTGGTGATG
pro <i>TRAB1</i> -f	GATCCATCACCACCACCACC	CTCCCAGCGAGCTCTGGAA
For qPCR		
<i>ONAC054a</i>	GGTTCGGGCAGATTTTCCGG	GAGAGCGAGGTGAAGGGATC
<i>ONAC054b</i>	GTTGGTGGTGAAGCAAACCT	GTAAAGCCACCATCCACCAT
<i>OsABA1</i>	ATATCAGAAAAGGATGCTACTA	TCCTCTTGCAGATTCATATGG
<i>OsABA3</i>	TCCATGGGAGGATGCAATCG	TACACTTGTTGCCCCACTTG
<i>OsCYP707A6</i>	AGATCGTCGGGGCGAGCGA	ACCTGCTGCTGTGATGGTGC
<i>OsCYP707A7</i>	GAGATTGTTGGTTCCAGCGA	TACGCCATTGTCGTCATTAT
<i>OsLEA3</i>	GCCAAGCAGAAGACCGCC	ACGGTACCTCTGCTCCCC
<i>OsABI1</i>	TTCAGGACGGTGGGCTCCA	TAGTTGTACGGAGTGCCACGT
<i>OsABI2</i>	GTTAGGCAATGACTCAAGTG	TTAGAGGAGCTGGAAGAGAA
<i>OsABI3</i>	GTGATTTTGTTCGTTCAAACG	CACCTTCACACCACGTATCA
<i>OsABI4</i>	TGCTGTTCTTGTTGCAGCTG	AAGCCCCACGCGGCCTC

<i>OsABI5</i>	CGAAGCTGAACTGAACTATC	CTGGCTGCCACCCCTATTTG
<i>OsZIP23</i>	GATGGAATTGGAAGCTGAGG	GTCCAACCTGTCTGGCTCATT
<i>OsABF1</i>	CTCAAAGGAAATGGTTGTTCCAGT	CTACCACTCCATCGAGTTTGT
<i>OsABF2</i>	GCTTATATAATGGAGTTGGAAG	CATGGACCAGTCAGTGTTCTG
<i>OsABF4</i>	CAAATGCTCAGCAAGTTGGA	TGAAGCATGCTGACAAGACC
<i>TRAB1</i>	GAGGAAATTATGGAAATGCAG	TTACCAGGGACCTGTCAATG
<i>OsRAB16a</i>	TCAAGGAGAAGATCAAGGA	ATCTTGTCCATGATGCCCTT
<i>OsUBQ10</i>	ACCACTTCGACCGCCACTACT	ACGCCTAAGCCTGCTGGTT
