

TaBRI 1- B1	1	MDSLRLAI AAALLFLAALAAA- - -	DDAQLLDDFRAALPSRDALDGWAARDGACRFP	GAV		
TaBRI 1- D1	1	MDSLRLAI AAALLFLAALAAAAAA	DDAQLLDDFRAALPNRDALDGWAARDGACRFP	GAV		
TaBRI 1- A1	1	MDSLRLAI AAALLFLAALAAAAAA	DDAQLLDDFRAALPNRDALDGWAARDGACRFP	GAV		
consensus	1	*****	*****	*****		
TaBRI 1- B1	57	CRGGRLTSLSLAAVALNADFR	AVATLLQLQSAVERLSLRGANVSGAL	SAAAGARCGSKLQ		
TaBRI 1- D1	61	CRGGRLTSLSLAAVALNADFR	AVATLLQLQSAVERLSLRGANVSGAL	AAAAAGARCGSKLQ		
TaBRI 1- A1	60	CRGGRLTSLSLAAVALNADFR	AVANTLLQLSAVERLSLRGANVSGAL	AAAAAGARCGSKLQ		
consensus	61	*****	*****	*****		
TaBRI 1- B1	117	ELDL SGNAAL RGSVADVAAL	AASCGGLKTLNLSGDAVGAAKS	AGGGGGGGQGF AAL DAL DL		
TaBRI 1- D1	121	ELDL SGNAAL RGSVTDVAAL	AGS CAGL KTLNLSGDAVGTA	KTAGAGGGGGQGF AAL DAL DL		
TaBRI 1- A1	120	ELDL SGNAAL RGSVADVAAL	AGS CAGLRTL NLSGGAVGAAKA	AGGGGGGGQGF AALDTL DL		
consensus	121	*****	*****	*****		
TaBRI 1- B1	177	SSNKI TGDADLRWMVGAGL	GS VRWLDLAWNKI SGGLSDF	TNCSGLQYLDLSGNLI AGDVA		
TaBRI 1- D1	181	SSNKI AGDADLRWMVGAGL	GS VRWLDLAWNKI SGGLSDF	TNCSGLQYLDLSGNLI AGDVA		
TaBRI 1- A1	180	SSNKI AGDADLRWMVGAGL	GS VRWLDLAWNKI SGGLSDF	TNCSGLQYLDLSGNLI AGDVA		
consensus	181	*****	*****	*****		
TaBRI 1- B1	237	AGALSGCRSLRALNLSNHL	AGAFPPNIAGLTSLTALNLS	NNNFSGDVPADAF	TGLQQLQ	
TaBRI 1- D1	241	AGALSGCRSLRALNLSNHL	AGAFPPNIAGLTSLTALNLS	NNNFSGEVPADAF	TGLQQLQ	
TaBRI 1- A1	240	AGALSGCRSLRALNLSNHL	AGAFPPNIAGLTSLTALNLS	NNNFSGDVPADAF	TGLQQLQ	
consensus	241	*****	*****	*****	*****	
TaBRI 1- B1	297	SLSLSFNHFSGSI	ADSVAALPDLEVL	DLSSNFSGTI	PSTLCQDPNSRLRVLYLQNNYLS	
TaBRI 1- D1	301	SLSLSFNHFSGSI	PDSVAALPDLEVL	DLSSNFSGTI	PSTLCQDPNSRLRVLYLQNNYLS	
TaBRI 1- A1	300	SLSLSFNHFSGSI	PDSVAALPDLEVL	DLSSNFSGTI	PSTLCQDPNSRLRVLYLQNNYLS	
consensus	301	*****	*****	*****	*****	
TaBRI 1- B1	357	GSIPEAVSNCTDLVSLDLS	SLNYINGSIPESLGELGRLQDLI	MWQNLEGEIPASLSSI	PG	
TaBRI 1- D1	361	GSIPEAVSNCTDLVSLDLS	SLNYINGSIPESLGELGRLQDLI	MWQNLEGEIPASLSSI	PG	
TaBRI 1- A1	360	GSIPEAVSNCTDLVSLDLS	SLNYINGSIPESLGELGRLQDLI	MWQNLEGEIPASLSSI	PG	
consensus	361	*****	*****	*****	*****	
TaBRI 1- B1	417	LEHLILDYNGLTGSI	PPELAKCKQLNWI	SLASNRLSGPIPPWL	GKLSNLAILKLSNNSFT	
TaBRI 1- D1	421	LEHLILDYNGLTGSI	PPELAKCKQLNWI	SLASNRLSGPIPPWL	GKLSNLAILKLSNNSFT	
TaBRI 1- A1	420	LEHLILDYNGLTGSI	PPELAKCKQLNWI	SLASNRLSGPIPPWL	GKLSNLAILKLSNNSFT	
consensus	421	*****	*****	*****	*****	
TaBRI 1- B1	477	GQI PAELGDCKSLVWLDL	NSNQLNGSI PPQLAEQSGKMTVGLI	I GRPYVYL RNDLSSQC		
TaBRI 1- D1	481	GQI PAELGDCKSLVWLDL	NSNQLNGSI PPQLAEQSGKMTVGLI	I GRPYVYL RNDLSSQC		
TaBRI 1- A1	480	GQI PAELGDCKSLVWLDL	NSNQLNGSI PPQLAEQSGKMTVGLI	I GRPYVYL RNDLSSQC		
consensus	481	*****	*****	*****	*****	
TaBRI 1- B1	537	RGKGSLLFESSI	RSEDLGRMP	SKKLCNFTRMYMGSTEYTF	NKNGSMI FLDLSFNQLDSEI	
TaBRI 1- D1	541	RGKGSLLFESSI	RSEDLGRMP	SKKLCNFTRMYMGSTEYTF	NKNGSMI FLDLSFNQLDSEI	
TaBRI 1- A1	540	RGKGSLLFESSI	RSEDLGRMP	SKKLCNFTRMYMGSTEYTF	NKNGSMI FLDLSFNQLDSEI	
consensus	541	*****	*****	*****	*****	
TaBRI 1- B1	597	PKELGNMYYLMI	MNLGHNLLSGAI	PTELAGAKKLAVL	DL SYNRLGEP	PSSFSSLSLSEI
TaBRI 1- D1	601	PKELGNMYYLMI	MNLGHNLLSGAI	PTELAGAKKLAVL	DL SYNRLGEP	PSSFSSLSLSEI
TaBRI 1- A1	600	PKELGNMYYLMI	MNLGHNLLSGAI	PTELAGAKKLAVL	DL SYNRLGEP	PSSFSSLSLSEI
consensus	601	*****	*****	*****	*****	*****
TaBRI 1- B1	657	NLSSNQLNGTI	PELGSLATFPKSYENN	SGLCGFPLPAC	PHTGQGSS	NGGQSNRRKASL
TaBRI 1- D1	661	NLSSNQLNGTI	PELGSLATFPKSYENN	SGLCGFPLPAC	PHTGQGSS	NGGQSNRRKASL
TaBRI 1- A1	660	NLSSNQLNGTI	PELGSLATFPKSYENN	SGLCGFPLPAC	QSHGQGSS	NGGQSSRRKASL
consensus	661	*****	*****	*****	*****	*****

Figure S1. Multiple alignment of deduced amino acid sequence of TaBRI1 of A (TaBRI1-A1), B (TaBRI1-B1) and D (TaBRI1-D1) genomes. Black regions show identical amino acid residues among the three proteins, and the gray regions show identical amino acid residues among two of the three proteins. The points show the absent amino acid residues. The positions of amino acids are given on the right.

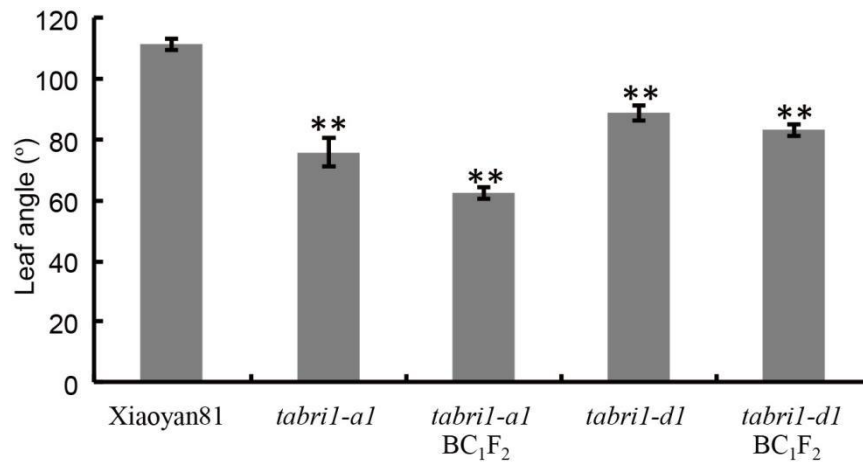


Figure S2. The leaf angle in the wild type (WT), *tabri1* mutants, and corresponding. BC₁F₂ homozygous individuals for *tabri1* deletion identified with *TaBRI1-A1* and *TaBRI1-D1* specific primers at 14 DPA. DPA represents days post-anthesis. Data are means $\pm$ SE of fifteen plants.

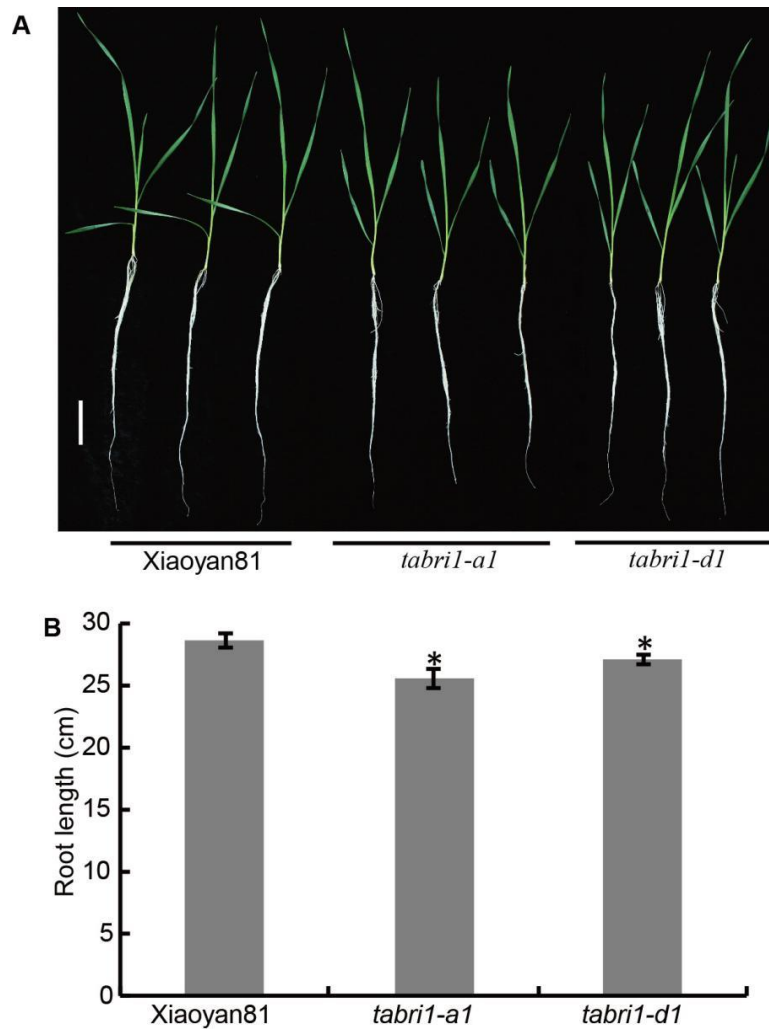


Figure S3. The root length of WT and *tabri1* mutants at seedling stage. **(A)** Root morphology in WT and *tabri1* mutants. Bar = 5 cm; **(B)** Statistic analysis of root length in WT and *tabri1* mutants. All values are means $\pm$ SE (n = 15). * indicates significant differences between WT and *tabri1* mutants at $P < 0.05$.

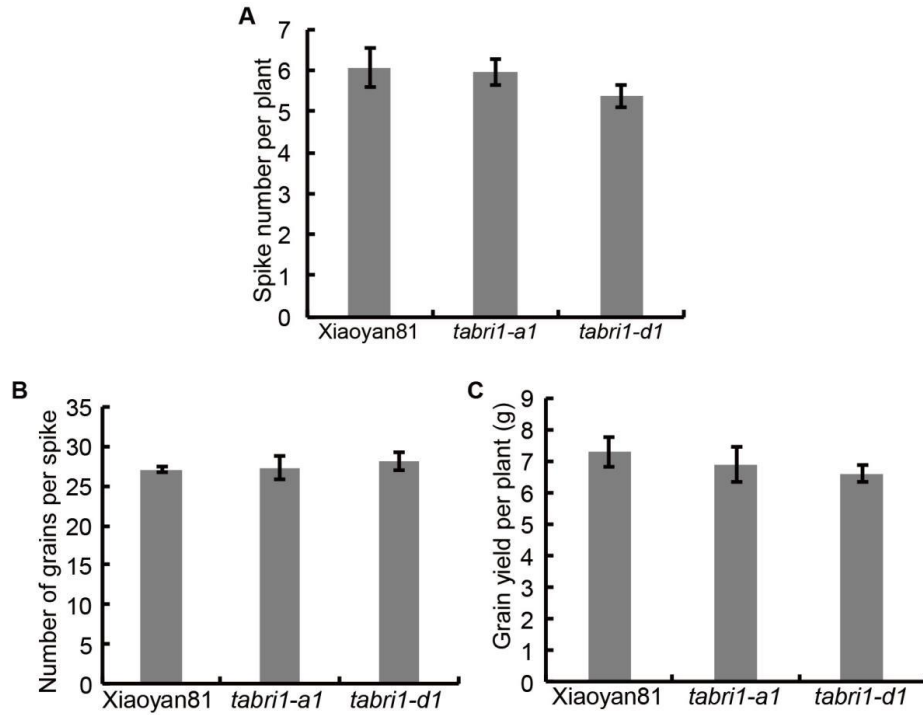


Figure S4. The yield traits in WT and *tabri1* mutants. (A) Spike number per plant; (B) Number of grains per spike; (C) Grain yield per plant. All phenotypic data were measured from field-grown plants under normal cultivation conditions. All values are means $\pm$ SE (n = 15).

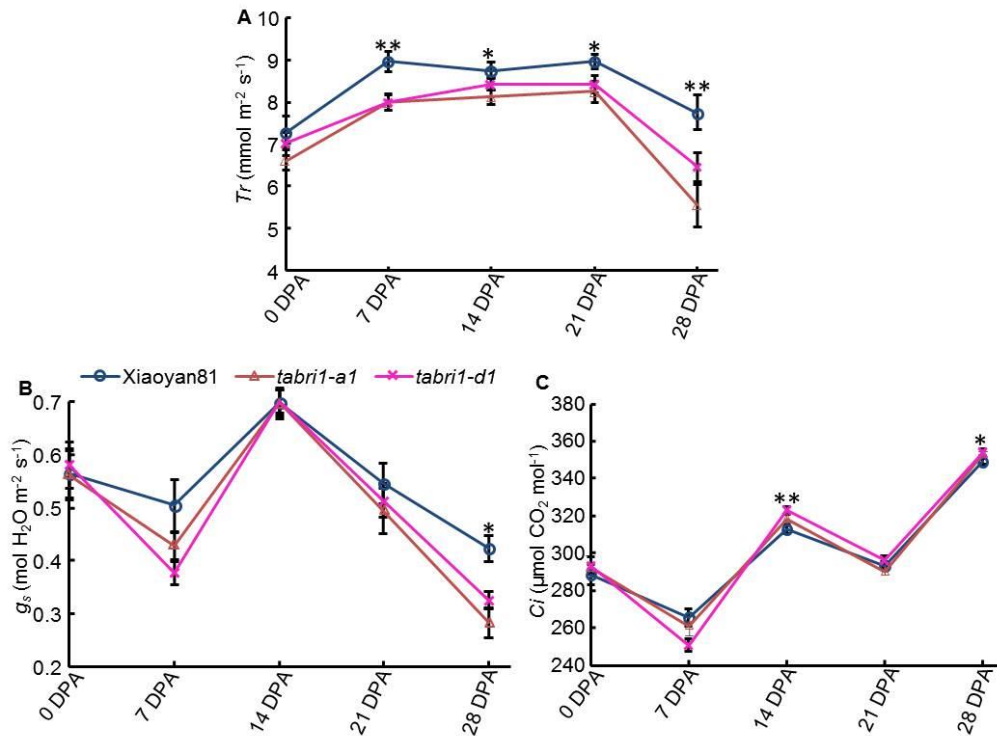


Figure S5. Photosynthesis parameters in WT and *tabri1* mutants during the whole post-anthesis period. (A) Transpiration rate, Tr ; (B) Stomatal conductance, g_s ; (C) Interacellular CO_2 partial pressure, C_i . All values are means $\pm$ SE (n = 8). * and ** indicate significant differences between WT and *tabri1* deletion plants at $P < 0.05$ and $P < 0.01$, respectively.

Table S1. Primers used in this work.

Experiment	Name	Sequence
realtime PCR	TaBRI1(QP)F	GCCACCAGAGTACTACCAGAGCTTC
realtime PCR	TaBRI1(QP)R	GCGATTTTCAAATGCTCCAGC
realtime PCR	TaBRI1-A1(QP)F	CTGGAGCTGGAGCTGCTGGAG
realtime PCR	TaBRI1-A1(QP)R	TaBRI1.1specifeic(R)
realtime PCR	TaBRI1-D1(QP)F	GTGATGACGATGTTCAAGGAGATCC
realtime PCR	TaBRI1-D1(QP)R	TaBRI1.2specifeic(R)
realtime PCR	ACTINF	ACCTTCAGTTGCCCAGCAAT
realtime PCR	ACTINR	CAGAGTCGAGCACAATACCAGTTG
realtime PCR	TaDWARF4(QP)F	GGTTGCCCTAAAGCCGTTGAA
realtime PCR	TaDWARF4(QP)R	CGTTGCCCTTCCATCTCCAAG
realtime PCR	TaCPD1(QP)F	GAGATGGCAGAGCAACAACAAAC
realtime PCR	TaCPD1(QP)R	CGAGTGGTGGGAAAGAAGACGAG
realtime PCR	TaCYC90D1(QP)F	CTCGCCGTCAAGTTCCTCAG
realtime PCR	TaCYC90D1(QP)R	CATGCTGCGTGAATGACAAGGAC
VIGS	TaBRI1(VIGS)F	AGCTAGCCAGAGCTTGTTCTC
VIGS	TaBRI1(VIGS)R	TGCTAGCGGTACTTGCCTCATC
Chromosome location	TaBRI1(RACE)F1	GCCACCAGAGTACTACCAGAGCTTC
Chromosome location	TaBRI1.1specifeic(R)	CCCGGCCCCAAACTGGATGG
Chromosome location	TaBRI1.2specifeic(R)	GGTATCAGCATCTGAGAGACTGTG
Chromosome location	TaBRI1.3specifeic(R)	CAGCTCCGGGTCAAACACATCC
TaBRI1 amplification	TaBRI1(F)	CTTCTCGCATGGTCTCAAGGTAG
TaBRI1 amplification	TaBRI1(R3)	GCGATTTTCAAATGCTCCAGC
Vector construction	TaBRI1(pri)F	GGAATTCCATATGGATTCCCTGCGGCTG
Vector construction	TaBRI1(pri)R	CGCGGATCCTAATCTTTCTCCTCCTTG
3'-RACE	TaBRI1(RACE)F1	GCCACCAGAGTACTACCAGAGCTTC
3'-RACE	TaBRI1(RACE)F2	CCGGAGCTGCTGAAGGACGATC