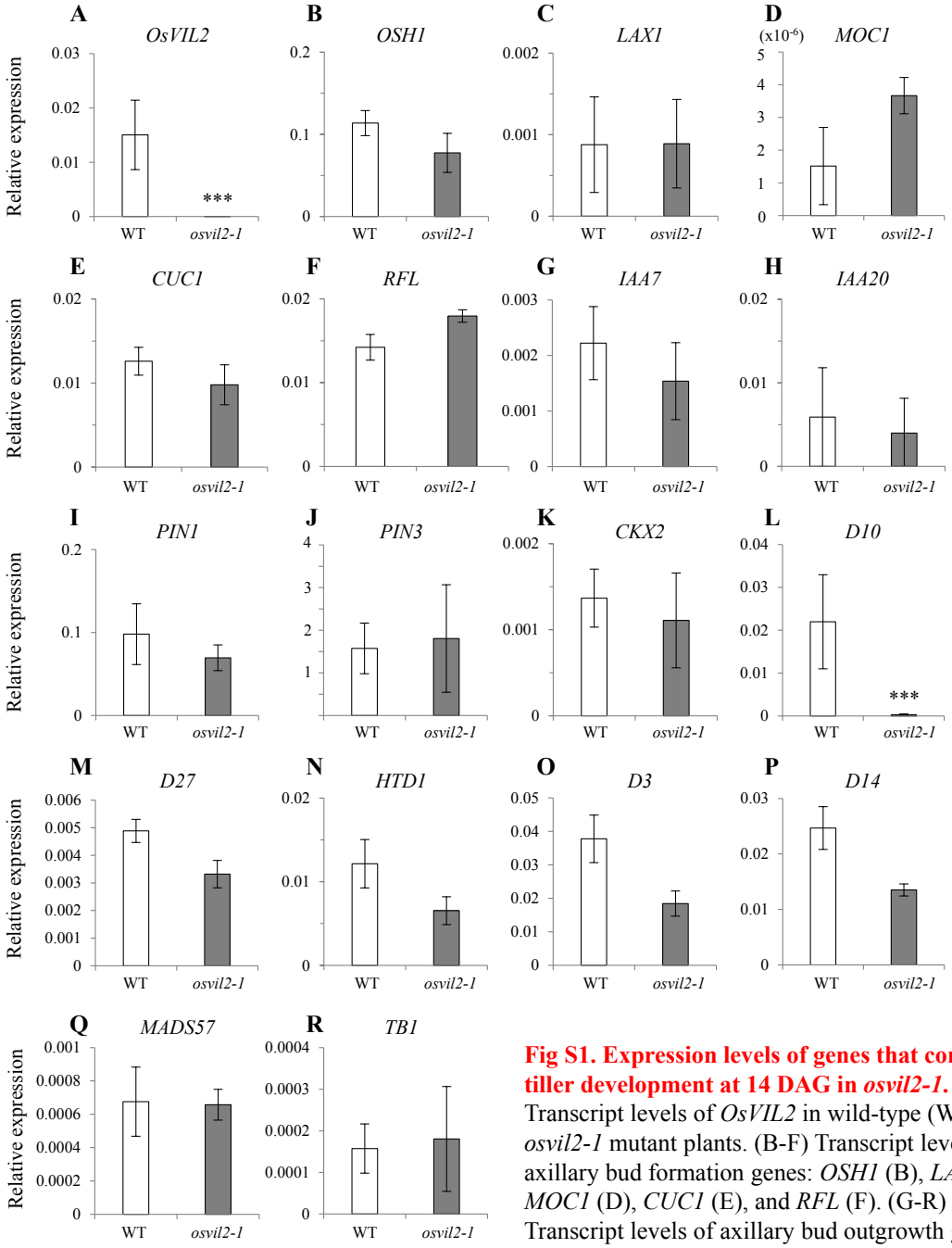

Fig S1. Expression levels of genes that control tiller development at 14 DAG in *osvil2-1*. (A) Transcript levels of *OsVIL2* in wild-type (WT) and *osvil2-1* mutant plants. (B-F) Transcript levels of axillary bud formation genes: *OSH1* (B), *LAX1* (C), *MOC1* (D), *CUC1* (E), and *RFL* (F). (G-R) Transcript levels of axillary bud outgrowth genes: *IAA7* (G), *IAA20* (H), *OsPIN1* (I), *OsPIN3* (J), *OsCKX2* (K), *D10* (L), *D27* (M), *HTD1* (N), *D3* (O), *D14* (P), Os*MADS57* (Q) and *OsTB1* (R). Error bars are standard deviations, n=4. Statistical significance is indicated by * $P < 0.05$ and *** $P < 0.001$.

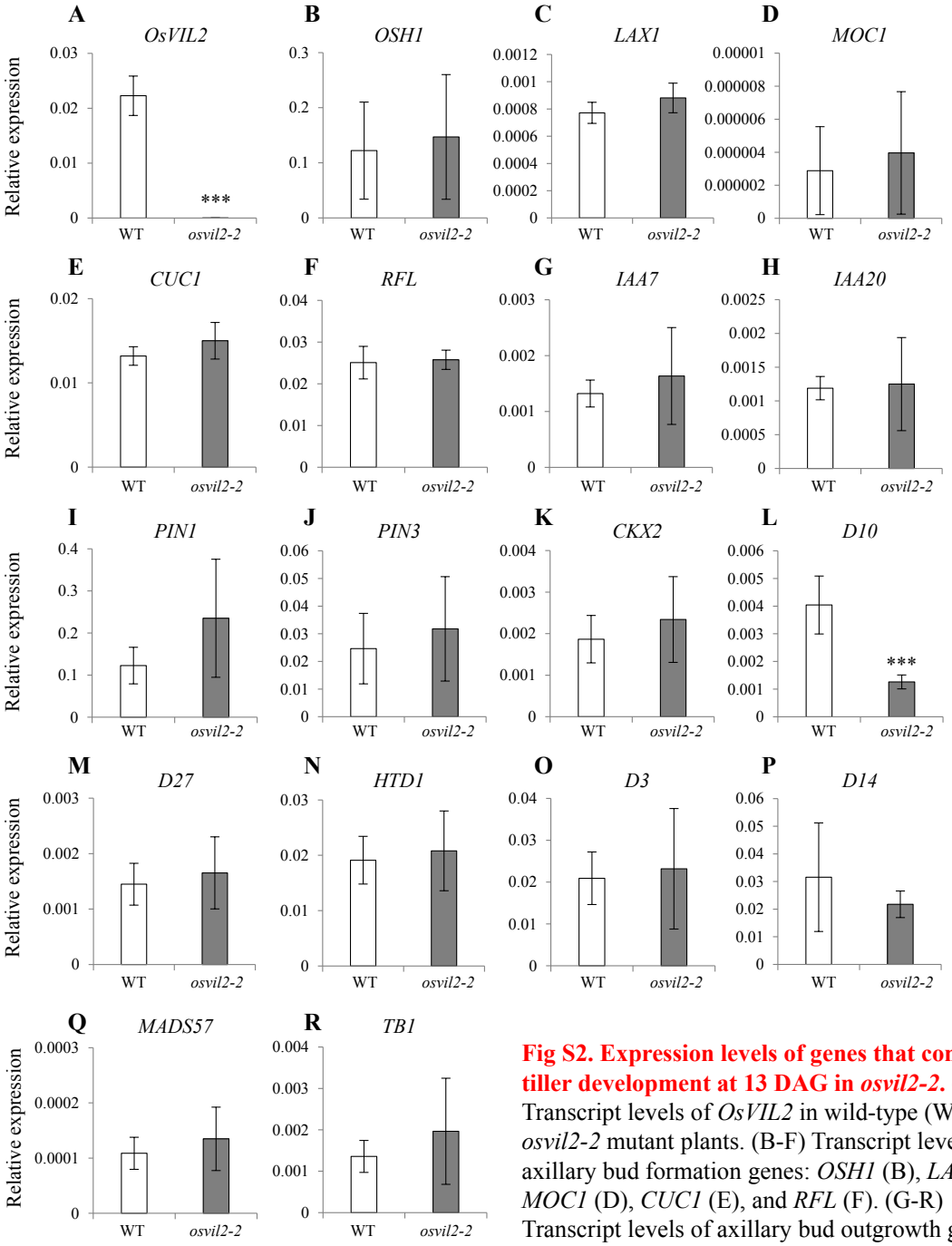

Fig S2. Expression levels of genes that control tiller development at 13 DAG in *osvil2-2*. (A) Transcript levels of *OsVIL2* in wild-type (WT) and *osvil2-2* mutant plants. (B-F) Transcript levels of axillary bud formation genes: *OSH1* (B), *LAX1* (C), *MOC1* (D), *CUC1* (E), and *RFL* (F). (G-R) Transcript levels of axillary bud outgrowth genes: *IAA7* (G), *IAA20* (H), *OsPIN1* (I), *OsPIN3* (J), *OsCKX2* (K), *D10* (L), *D27* (M), *HTD1* (N), *D3* (O), *D14* (P), Os*MADS57* (Q) and *OsTB1* (R). Error bars are standard deviations, n=4. Statistical significance is indicated by * $P < 0.05$ and *** $P < 0.001$.

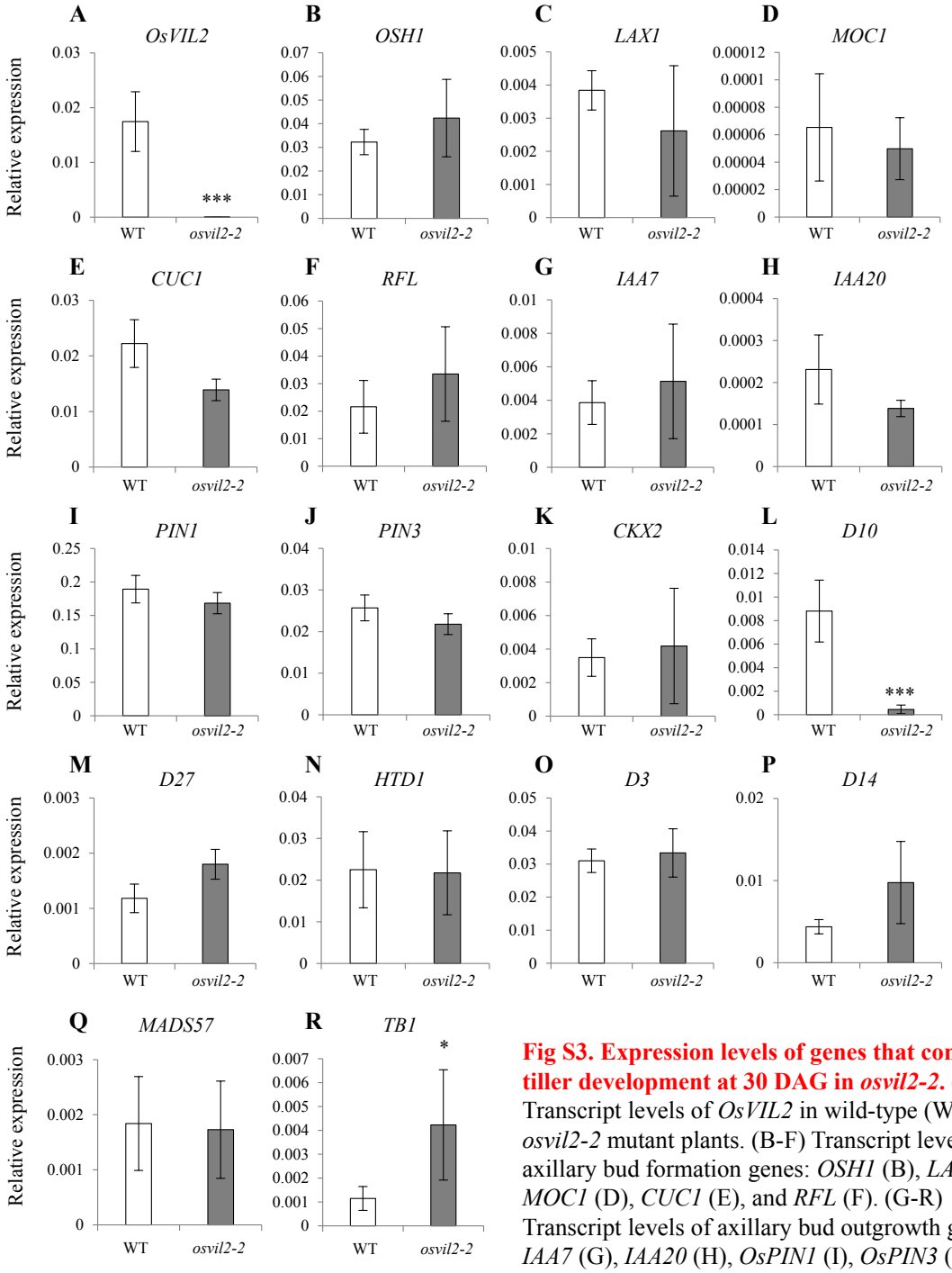

Fig S3. Expression levels of genes that control tiller development at 30 DAG in *osvil2-2*. (A) Transcript levels of *OsVIL2* in wild-type (WT) and *osvil2-2* mutant plants. (B-F) Transcript levels of axillary bud formation genes: *OSH1* (B), *LAX1* (C), *MOC1* (D), *CUC1* (E), and *RFL* (F). (G-R) Transcript levels of axillary bud outgrowth genes: *IAA7* (G), *IAA20* (H), *OsPIN1* (I), *OsPIN3* (J), *OsCKX2* (K), *D10* (L), *D27* (M), *HTD1* (N), *D3* (O), *D14* (P), Os*MADS57* (Q) and *OsTB1* (R). Error bars are standard deviations, n=4. Statistical significance is indicated by * $P < 0.05$ and ***$P < 0.001$.

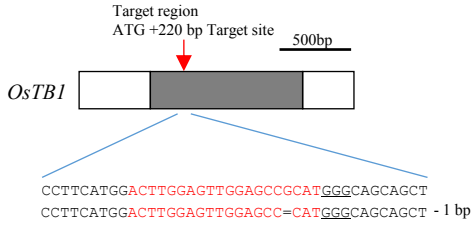

Fig S4. Analysis of *ostb1* null mutant using CRISPR/Cas9 system. Schematic diagram of *OsTB1* gene and the position of target site. Deleted sequence is indicated with =.

Supplementary Table 1. Primer sequences used in this study

Primer name	Sequence (5' to 3')
osvil2-1 genotyping_L	AGCGACTCTTAATCCAGAAG
osvil2-1 genotyping_RS	GCACAGACAAATTAGAGACT
OsVIL2_RT_F (RNA in situ_F)	GTGCCATCTTGAATGTGCTC
OsVIL2_RT_R (RNA in situ_R)	GAGCATCTTTAGCTATCACC
CKX2_RT_F	CGGTGACGAGGTGTTCTACAC
CKX2_RT_R	CCAAGATCTCGTCGTTCTGC
OSH1-F	CCTGAAGCAGATCAACAACT
OSH1-R	CGATCTAGGTCATGGTAGCTGG
LAX1-F	ATGCTGGAGCAGGCCATCCA
LAX1-R	GTTCAGCTCAAGGGCCAGA
MOC1-F	TTCTGCTTGTTGCCTTCC
MOC1-R	ATCATTACCCACCAAAAG
CUC1-F	GACTTCTGGAACTAATCC
CUC1-R	AAGGAGGAAGAGAAGGAT
RFL_RT_F	GTTGTCCGAGGAGCATGAC
RFL_RT_R	CCTCGCCGGGCTCCGTCACC
IAA7-F	TAATCCATGCAGCTAATAACCTCT
IAA7-R	GTTGGTTAAGTAGGAACAGGAAAACC
IAA20-F	TTGTACGTGAACGGGATTATTTG
IAA20-R	CATGCTTATGAAATTGCTGAAACA
PIN1-F	AGTACAAAGCTTGGGGGGAC
PIN1-R	ATCTCTTGTCAGAATCGGCG
PIN3-F	ATCCTGAGCACAGCGGTAAT
PIN3-R	CAATGTCCGACAACAGGCTA
D3-F	GGTATCGAATCACTGCAGAC
D3-R	CTCTGGGGCTGGATAATAGT
D10-F	CTATTGTAAGCTCCGACGAT
D10-R	CTAGTCTTCTCGGCTACAGAT
D14-F	CGCCTTCGTCGGCCACTC
D14-R	TCGAACCCGCCGTGGTAGTC
D27-F	TCTGGGCTAAAGAATGAAAAGGA
D27-R	AGAGCTTGGGTCACAATCTCG
HTD1-F	TGGCTATGTTCTTCTTGTAGAG
HTD1-R	AGTTAGACTGGATCTGATGCTT
OsMADS57-F	ATGGGGAGGGGGAAGATAG
OsMADS57-R	AATTTAGGCTTCTAGAAAGTTCG
TB1-F	GCCGGATGCAAGAAATC
TB1-R	TCAGCAGTAGTGCCGCGAA

Supplementary Table 2. Primer sequences used in ChIP analysis

Primer name	Sequence (5' to 3')
TB1_1F	ggctagaccaggtaacaagtc
TB1_1R	atgtgacccttaagacttgc
TB1_2F	CTAGCTAGCTAGGGACCATGT
TB1_2R	CTGCCTCCTTTGTAATCCTC
TB1_3F	TGCCCTAGGTCACTTGTAGC
TB1_3R	CTAGGAGTTTGGATGTGAGG
TB1_4F	GCAAGCAAGCACGAACAATTC
TB1_4R	GATGTGTCCGGCCATGCAC
TB1_5F	gccggatgcaagaaatct
TB1_5R	TCAGCAGTAGTGCCGCGAA
TB1_6F	cgtcgtctacgccaattcg
TB1_6R	GTCAACTCCGGATAAACGCG
Hd3a_1F	TCCAACGTTAGCATCCACAA
Hd3a_1R	CCTCTGGTTTTCAGTAAGAG
Hd3a_2F	GTATACATGTGTCTTCTTAG
Hd3a_2R	GCTGCCTCCAATCTGTAGGA
Hd3a_3F	AGACGATGCAGAAAGCGGCC
Hd3a_3R	TGGCCATGCAAAATTACTATGTC
Hd3a_4F	CACTGACCGAGCTAAGAGAG
Hd3a_4R	GATCGAGCTGTGGTTGAGAG
Hd3a_5F	TCAGCTAGCAGATCACCTAGCTAG
Hd3a_5R	AAAACCCTGAAGGTTTATAG
Hd3a_6F	CTATAAACCTTCAGGGTTTT
Hd3a_6R	TCATGTCATTGCCGCCGACC
Hd3a_7F	GGTCGGCGGCAATGACATG
Hd3a_7R	GTCATCTTGGGTTAAGTACC

Supplementary Table 3. Primers used for plasmid construction for the Polycistronic tRNA-gRNA (PTG)/Cas9 method.

Primer name	Sequence (5' to 3')
L5AD5-F	CGGGTCTCAGGCAGGATGGGCAGTCTGGGCAACAAAGCACCAGTGG
L3AD5-R	TAGGTCTCCAAACGGATGAGCGACAGCAAACAAAAAAAAAAGCACCGACTC
S5AD5-F	CGGGTCTCAGGCAGGATG GGCAGTCTGGGCA
S3AD5-R	TAGGTCTCCAAACGGATG AGCGACAGCAAAC
gRNA1_TB1-1_F	TAGTCTCCGTCCATGGGGCTGTTTTAGAGCTAGAA
gRNA1_TB1-1_R	ATGGTCTCAGGACATACCGCTTGCACCAGCCGGGAA
gRNA2_TB1-2_F	TAGGTCTCCTTGGAGCCGCATGTTTTAGAGCTAGAA
gRNA2_TB1-2_R	ATGGTCTCACCAACTCCAAGTTGCACCAGCCGGGAA
gRNA3_V2-1_F	TAGGTCTCCAGCAGGATCAATGTTTTAGAGCTAGAA
gRNA3_V2-1_R	ATGGTCTCATGCTAAATGCCGTGCACCAGCCGGGAA
gRNA4_V2-2_F	TAGGTCTCCAAACTGCAGTCTGTTTTAGAGCTAGAA
gRNA4_V2-2_R	ATGGTCTCAGTTTGTCAGGAGTGCACCAGCCGGGAA