

Supplementary Material

OsOFP6 Overexpression Alters Plant Architecture, Grain Shape, and Seed Fertility

Xuting Zhu ^{1,2,†}, Yuan Li ^{1,2,†}, Xiangqian Zhao ¹, Yukai Feng ^{1,2}, Zhengkai Bao ¹, Wenzhen Liu ^{2,*} and Feifei Li ^{1,*}

¹College of Advanced Agricultural Science, Zhejiang A&F University, Hangzhou 311300, China;

zxt1477702045@163.com (X.Z.); lylylyyqq@163.com (Y.L.); zhaoxq@zafu.edu.cn (X.Z.);

fengyukai0103@163.com (Y.F.); 15088793603@163.com (Z.B.)

² State Key Laboratory of Rice Biology and Breeding, China National Rice Research Institute, Hangzhou 311400, China

* Correspondence: liuwenzhen@caas.cn (W.L.); lifei-fei@163.com (F.L.)

† These authors contributed equally to this work.

Supplementary Tables

Supplementary Table S1. Primers used in TAIL PCR.

Primer	Primer sequence (5'-3')
TL1	TCCCAGATAAGGGAATTAGGGTTCCTA
TL2	GTTTCCTATAGGGTTTCGCTCATGTGTTG
TL3	CCAGTACTAAAATCCAGATCCCCCGA
AD1	NTCGA(G/C)T(A/T)T(G/C)G(A/T)GTT
AD2	NGTCGA(G/C)(A/T)GANA(A/T)GAA
AD3	(A/T)GTGNAG(A/T) ANCANAGA
AD4	NGTA(G/C)A(G/C)(A/T)GTNA(A/T)CAA

Supplementary Table S2. Primers were used to knock out vector.

Primer	Primer sequence (5'-3')
gRNA1	GTTGGCGCGCCGCCCCGGGGAGGTG
gRNA2	AAACCACCTCCCCGGGCGGCGCGC
gRNA3	GTTGGACCGAGAAGAGGCCCGACA
gRNA4	AAACTGTCGGGCCTCTTCTCGGTC

Supplementary Table S3. Primers were used to construct overexpression vectors.

Primer	Primer sequence (5'-3')
<i>OsOFP6</i> -Flag- <i>Bam</i> H I	GGATCCATGGGGAGGCACAAGTTCAG
<i>OsOFP6</i> -Flag- <i>Kpn</i> I	GGTACCCATCTTGATGTCCGCGAGGT

Supplementary Table S4. Primers used in this study for gene expression analysis by qRT-PCR.

Primer	Primer sequence (5'-3')
<i>ACTIN1-F</i>	TGCTATGTACGTCGCCATCCAG
<i>ACTIN1-R</i>	AATGAGTAACCACGCTCCGTCA
<i>RT-OsOFP6-F</i>	CGTCGACGTGTTTCGAGCATA
<i>RT-OsOFP6-R</i>	GGATTCACCATGCAAGACAAGA
<i>Q-OsCPS-F</i>	TCTCCCCTTCAGCTACTGCT
<i>Q-OsCPS-R</i>	ACGCCTCCGTCGAATTTCTT
<i>Q-OsKAO-F</i>	CTTCCTCCATCATTTTCTCC
<i>Q-OsKAO-R</i>	AAGCAGTTGTCCACAGGC
<i>Q-GA3ox1-F</i>	TGATTGCAATTATCCATGCCAG
<i>Q-GA3ox1-R</i>	TCCTGGTTCTACAGTGAAACTC
<i>Q-OsGA13ox-F</i>	AGAAGTGGAGAAAAGACTACGG
<i>Q-OsGA13ox-R</i>	CAATGATCTTTCTCTGGTGTGC
<i>Q-GA20ox3-F</i>	CTACCGGTCGGACACCAACA
<i>Q-GA20ox3-R</i>	TTTGCTTGATCCAGGCGACG
<i>Q-OsGID2-F</i>	AGAGAGCCGTGGTAATGAGG
<i>Q-OsGID2-R</i>	AAGACCTTGGACTCTGGAGC
<i>Q-SLR1-F</i>	GACGTCAACGAACGCTCAATT
<i>Q-SLR1-R</i>	CGGAGTCCAGTCGTCGATCT
<i>Q-D2-F</i>	GCTCAAGAGGCGAAAAACCG
<i>Q-D2-R</i>	ACCGCAGCGTCTCTGTTATC
<i>Q-D11-F</i>	TCACTGCTCCAGGTATGGGA
<i>Q-D11-R</i>	ATGAATTGGCCTGGGGTAGC
<i>Q-CPD-F</i>	CCCACCACACGAACTCTCAA
<i>Q-CPD-R</i>	AAGAGCAGCTGCAAAACGAC
<i>Q-DWARF-F</i>	CACCAGGGAGAAGCTCACAG
<i>Q-DWARF-R</i>	TCTTCGGGCGCTTTACCTTT
<i>Q-DWARF4-F</i>	GAAGAGCGGGTTGAGAAGC
<i>Q-DWARF4-R</i>	CAGAGCCCATCCGAGAAGA
<i>Q-BZR1-F</i>	CCATGGAGATAGAAGGGACGG
<i>Q-BZR1-R</i>	GTCACCCTCCCCTTGTCGAA

Supplementary Table S5. Primers were used for hygromycin verification.

Primer	Primer sequence (5'-3')
HPT-F	TGTTGGCGACCTCGTATTGG
HPT-R	CTTCGATGTAGGAGGGCGTG

Supplementary Table S6. Primers were used for coseparation analysis.

Primer	Primer sequence (5'-3')
P1	AAGATCGCAATTCGCAAGGT
P2	CGTAGGATCGTGTGGTAATGAA
P3	CGTCCGAGGGCAAAGAAATAG

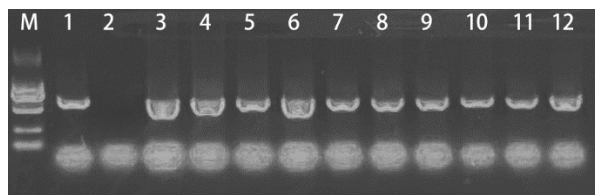
Supplementary Table S7. Primers were used to construct subcellular localization vector.

Primer	Primer sequence (5'-3')
<i>OsOFP6</i> -GFP- <i>Bam</i> H I	TCTAGACATGGGGAGGCACAAGTTCAG
<i>OsOFP6</i> -GFP- <i>Xba</i> I	GGTACCTTGAGACTGAGCTCTTCCG

Supplementary Table S8. Primers were used to construct protein interaction vectors.

Y-OsOFP6-F	atatggccatggaggccGAATTCATGGGGAGGCACAAGTTCAGG
Y-OsOFP6-R	atgctagttagcgccgCTGCAGCTACATCTTGATGTCCGCGAGG
Y-E3BB-F	CCGGAATTCTCATCAATGGCAACTCCA
Y-E3BB-R	CGCGGATCCCACAACGCAAACATCACC
BI-OsOFP6-F	tggcgcgccactagtggatccATGGGGAGGCACAAGTTCAGG
BI-OsOFP6-R	agcggtagcctcgaggtcgacCATCTTGATGTCCGCGAGGT
BI-E3BB-F	tggcgcgccactagtggatccATGGCAACTCCAAATACCTATTCA
BI-E3BB-R	agcggtagcctcgaggtcgacCCCAAATACCTCCTCATTGCA
cLU-OsOFP6-F	tacgcgtcccggggcggtaccATGGGGAGGCACAAGTTCAGG
cLU-OsOFP6-R	acgaaagctctgcaggtcgacCTACATCTTGATGTCCGCGAGG
nLU-E3BB-F	cgagctcggtaccgggatccATGGCAACTCCAAATACCTATTCA
nLU-E3BB-R	cgcgtacgagatctggtcgacCCCAAATACCTCCTCATTGCA

Supplementary Figures



Supplementary Figure S1. PCR assay revealed that the mutant was co-isolated with T-DNA insertion. M: marker 2000bp, 1: positive control, 2: wild-type plant, 3-12: mutants