Figure S1 Phylogenetic relationships of the MYB60, MYB16 and MYB106 homologs from Arabidopsis, rice, and bread wheat. The phylogenetic tree was constructed using the maximum-likelihood method with 1000 bootstraps. Two letter genus-species prefixes: *At*, *Arabidopsis thaliana*; *Os*, *Oryza sativa*; *Ta*, *Triticum aestivum*.
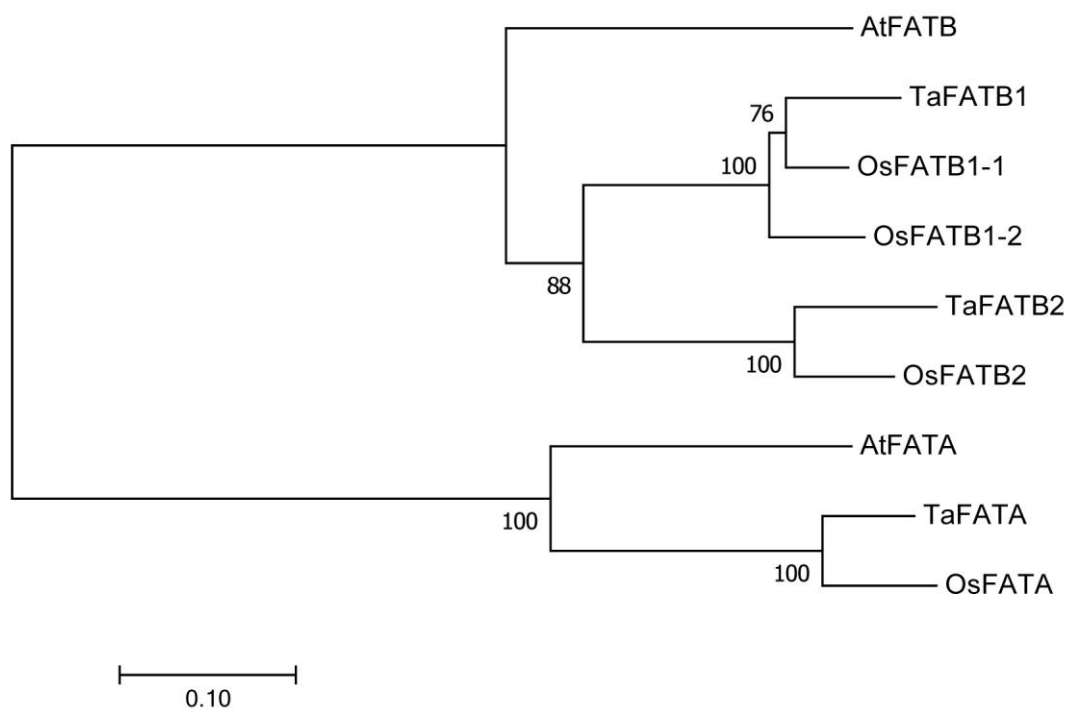
Figure S2 Phylogenetic relationships of the FATA and FATB homologs from Arabidopsis, rice, and bread wheat. The phylogenetic tree was constructed using the maximum-likelihood method with 1000 bootstraps. Two letter genus-species prefixes: *At, Arabidopsis thaliana*; *Os, Oryza sativa*; *Ta, Triticum aestivum*.

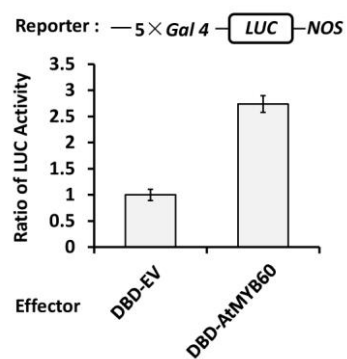**Figure S3** Transcriptional activation ability of Arabidopsis transcription factor AtMYB60 measured in Arabidopsis protoplast cells.

Figure S4 Nucleotide sequence alignment of promoter regions in the constructs in Fig5C. Identical nucleotide sequences among 9 promoter regions are shaded in dark, while nucleotide sequences conserved in at least 5 of the 9 promoter regions are shaded in gray.

Supplemental Table S1. Primers used in this study

Primer Name	Sequence	Annotation
qRT-PCR-*TaMYB60-1*-F	5' CCCTCCAGCTCCGCCGAG3'	qRT-PCR primer for *TaMYB60-1*, F primer
qRT-PCR-*TaMYB60-1*-R	5' GCGCATGGTGATCGTCGT3'	qRT-PCR primer for *TaMYB60-1*, R primer
qRT-PCR-*TaMYB60-2*-F	5' GGCGGTCTGTGCCGGTGA3'	qRT-PCR primer for *TaMYB60-2*, F primer
qRT-PCR-*TaMYB60-2*-R	5' GTGGTTGTGGTGGTCGAA3'	qRT-PCR primer for *TaMYB60-2*, R primer
qRT-PCR-*TaFATB1*-F	5' CTCGGGGTTCTTCCCCAC3'	qRT-PCR primer for *TaFATB1*, F primer
qRT-PCR-*TaFATB1*-R	5' TTGAGGTTAACCTTAGAG3'	qRT-PCR primer for *TaFATB1*, R primer
qRT-PCR-*TaFATB2*-F	5' CCGCCCAAGAGCGCCCTG3'	qRT-PCR primer for *TaFATB2*, F primer
qRT-PCR-*TaFATB2*-R	5' TAGAACGTCCTCGGCTGC3'	qRT-PCR primer for *TaFATB2*, R primer
qRT-PCR-*TaCER1*-F	5' CGGGGCCTTTGACTGAATG3'	qRT-PCR primer for *TaCER1*, F primer
qRT-PCR-*TaCER1*-R	5' GAAGACGATCTGGTCGTC3'	qRT-PCR primer for *TaCER1*, R primer
pCa-*TaMYB60-1as*-F	5'AAGGAAGTTTAAGTGGCAGCTGATGATGGA3'	For construct of BSMV-*TaMYB60-1as*, F primer
pCa-*TaMYB60-1as*-R	5'AACCACCACCACCGTCGCCACCGACGTCAAACC3'	For construct of BSMV-*TaMYB60-1as*, R primer
pCa-*TaMYB60-2as*-F	5'AAGGAAGTTTAAATGGCGCCTGATGCTGCTG3'	For construct of BSMV-*TaMYB60-2as*, F primer
pCa-*TaMYB60-2as*-R	5'AACCACCACCACCGTTCAACTACGACGCCGACGA3'	For construct of BSMV-*TaMYB60-2as*, R primer
pCa-*TaFATB1as*-F	5'AAGGAAGTTTAACGAGGTTTCCTTCGCCAT3'	For construct of BSMV-*TaFATB1as*, F primer
pCa-*TaFATB1as*-R	5'AACCACCACCACCGTAGTGCCCCGATTTCAATA'	For construct of BSMV-*TaFATB1as*, R primer
pCa-*TaFATB2as*-F	5'AAGGAAGTTTAACCGCCGTTTCCTGGGACT3'	For construct of BSMV-*TaFATB2as*, F primer
pCa-*TaFATB2as*-R	5'AACCACCACCACCGTGAACTGGCGAGCATAGTC'	For construct of BSMV-*TaFATB2as*, R primer
pENTRY-*proTaFATB1-4A*-F	5'GGGGACAAGTTTGTACAAAAAAGCAGGCTTCAAATTAAAATGGTCAAGAG3'	For the construction of pENTRY-*proTaFATB1-4A*, F primer
pENTRY-*proTaFATB1-4A*-R	5'GGGGACCACTTTGTACAAGAAAGCTGGGTCGACACAGCCGTACTACAGC3'	For the construction of pENTRY-*proTaFATB1-4A*, R primer
pENTRY-*proTaFATB1-7A*-F	5'GGGGACAAGTTTGTACAAAAAAGCAGGCTTCCTCCTTCTCCTTCCCCTGC3'	For the construction of pENTRY-*proTaFATB1-7A*, F primer
pENTRY-*proTaFATB1-7A*-R	5'GGGGACCACTTTGTACAAGAAAGCTGGGTCGACACAGCCGTACTACAGC3'	For the construction of pENTRY-*proTaFATB1-7A*, R primer
pENTRY-*proTaFATB1-7D*-F	5'GGGGACAAGTTTGTACAAAAAAGCAGGCTTCGTGCAGATAGAGCAGAGAA3'	For the construction of pENTRY-*proTaFATB1-7D*, F primer
pENTRY-*proTaFATB1-7D*-R	5'GGGGACCACTTTGTACAAGAAAGCTGGGTCAACAGAGCCCTACTACAGC3'	For the construction of pENTRY-*proTaFATB1-7D*, R primer
pENTRY-*proTaFATB2-7A*-F	5'GGGGACAAGTTTGTACAAAAAAGCAGGCTTCCCTAATCCAGGACTCCCTC3'	For the construction of pENTRY-*proTaFATB2-7A*, F primer
pENTRY-*proTaFATB2-7A*-R	5'GGGGACCACTTTGTACAAGAAAGCTGGGT	For the construction of pENTRY-*proTaFATB2-7A*, R

	CGGGAAGCACGGCTAGAAAG3'	primer
pENTRY-*proTaFATB2-7B*-F	5'GGGGACAAGTTTGTACAAAAAAGCAGGCT TCAGCCACACCAGTGGTGTGC3'	For the construction of pENTRY-*proTaFATB2-7B*, F primer
pENTRY-*proTaFATB2-7B*-R	5'GGGGACCACTTTGTACAAGAAAGCTGGGT CGGGAAGCACGGCTAGAAAC3'	For the construction of pENTRY-*proTaFATB2-7B*, R primer
pENTRY-*proTaFATB2-7D*-F	5'GGGGACAAGTTTGTACAAAAAAGCAGGCT TCTATTGTTCCTGGGTGTTCG3'	For the construction of pENTRY-*proTaFATB2-7D*, F primer
pENTRY-*proTaFATB2-7D*-R	5'GGGGACCACTTTGTACAAGAAAGCTGGGT CGGAAGCACGGCTAGAAAGC3'	For the construction of pENTRY-*proTaFATB2-7D*, R primer
pENTRY-*proTaCER1-6A*-F	5'GGGGACAAGTTTGTACAAAAAAGCAGGCT TCGTTTTTGCCACTCTAGCTT3 '	For the construction of pENTRY-*proTaCER1-6A*, F primer
pENTRY-*proTaCER1-6A*-R	5'GGGGACCACTTTGTACAAGAAAGCTGGGT CGGCTGGCTGGCTATGGTCGC3'	For the construction of pENTRY-*proTaCER1-6A*, R primer
pENTRY-*proTaCER1-6B*-F	5'GGGGACAAGTTTGTACAAAAAAGCAGGCT TCAAAAGGGAGACTCATTGTC3'	For the construction of pENTRY-*proTaCER1-6B*, F primer
pENTRY-*proTaCER1-6B*-R	5'GGGGACCACTTTGTACAAGAAAGCTGGGT CGACTGCCTGTGGTCGCCTC3'	For the construction of pENTRY-*proTaCER1-6B*, R primer
pENTRY-*proTaCER1-6D*-F	5'GGGGACAAGTTTGTACAAAAAAGCAGGCT TCCTAATCCTTTTGCCTTGTTG3'	For the construction of pENTRY-*proTaCER1-6D*, F primer
pENTRY-*proTaCER1-6D*-R	5'GGGGACCACTTTGTACAAGAAAGCTGGGT CGGCTGGCTGTGGTCGCCTC3'	For the construction of pENTRY-*proTaCER1-6D*, R primer
pENTRY-*AtMYB60*-F	5'GGGGACAAGTTTGTACAAAAAAGCAGGCT TCATGGGTAGGCCTCCATGCT3 '	For the construction of pENTRY-*AtMYB60*, F primer
pENTRY-*AtMYB60*-R	5'GGGGACCACTTTGTACAAGAAAGCTGGGT CTTAAAGCATATTAGAGAGC3'	For the construction of pENTRY-*AtMYB60*, R primer
pENTRY-*TaMYB60-1-5A*-F	5'GGGGACAAGTTTGTACAAAAAAGCAGGCT TCATGGGGGAGGCCGCCGTGCTG3'	For the construction of pENTRY-*TaMYB60-1-5A*, F primer
pENTRY-*TaMYB60-1-5A*-R	5'GGGGACCACTTTGTACAAGAAAGCTGGGT CTAGTACAGCAATGGCAGG3'	For the construction of pENTRY-*TaMYB60-1-5A*, R primer
pENTRY-*TaMYB60-1-5B*-F	5'GGGGACAAGTTTGTACAAAAAAGCAGGCT TCATGGGGGAGGCCGCCGTGCTG3 '	For the construction of pENTRY-*TaMYB60-1-5B*, F primer
pENTRY-*TaMYB60-1-5B*-R	5'GGGGACCACTTTGTACAAGAAAGCTGGGT CCTAGTACAGCAATGGCAGG3'	For the construction of pENTRY-*TaMYB60-1-5B*, R primer
pENTRY-*TaMYB60-1-5D*-F	5'GGGGACAAGTTTGTACAAAAAAGCAGGCT TCATGGGGGAGGCCGCCGTGCTG3'	For the construction of pENTRY-*TaMYB60-1-5D*, F primer
pENTRY-*TaMYB60-1-5D*-R	5'GGGGACCACTTTGTACAAGAAAGCTGGGT CCTAGTACAGCAATGGCAGG3'	For the construction of pENTRY-*TaMYB60-1-5D*, R primer
pENTRY-*TaMYB60-2-4A*-F	5'GGGGACAAGTTTGTACAAAAAAGCAGGCT TCATGGGGGAGGCCGCCGTGCTG3'	For the construction of pENTRY-*TaMYB60-2-4A*, F primer
pENTRY-*TaMYB60-2-4A*-R	5'GGGGACCACTTTGTACAAGAAAGCTGGGT CCTAGAACAGCATTGGAACG3'	For the construction of pENTRY-*TaMYB60-2-4A*, R primer
pENTRY-*TaMYB60-2-4B*-F	5'GGGGACAAGTTTGTACAAAAAAGCAGGCT TCATGGGGGAGGCCGCCGTGCTG3'	For the construction of pENTRY-*TaMYB60-2-4B*, F primer

pENTRY-*TaMYB60-2-4B*-R	5'GGGGACCACTTTGTACAAGAAAGCTGGGT CCTAGAACAGCATTGGAACG3'	For the construction of pENTRY-*TaMYB60-2-4B*, R primer
pENTRY-*TaMYB60-2-4D*-F	5'GGGGACAAGTTTGTACAAAAAAGCAGGCT TCATGGGGAGGCCGCCGTGCTG3'	For the construction of pENTRY-*TaMYB60-2-4D*, F primer
pENTRY-*TaMYB60-2-4D*-R	5'GGGGACCACTTTGTACAAGAAAGCTGGGT CCTAGAACAGCATTGGAACG3'	For the construction of pENTRY-*TaMYB60-2-4D*, R primer