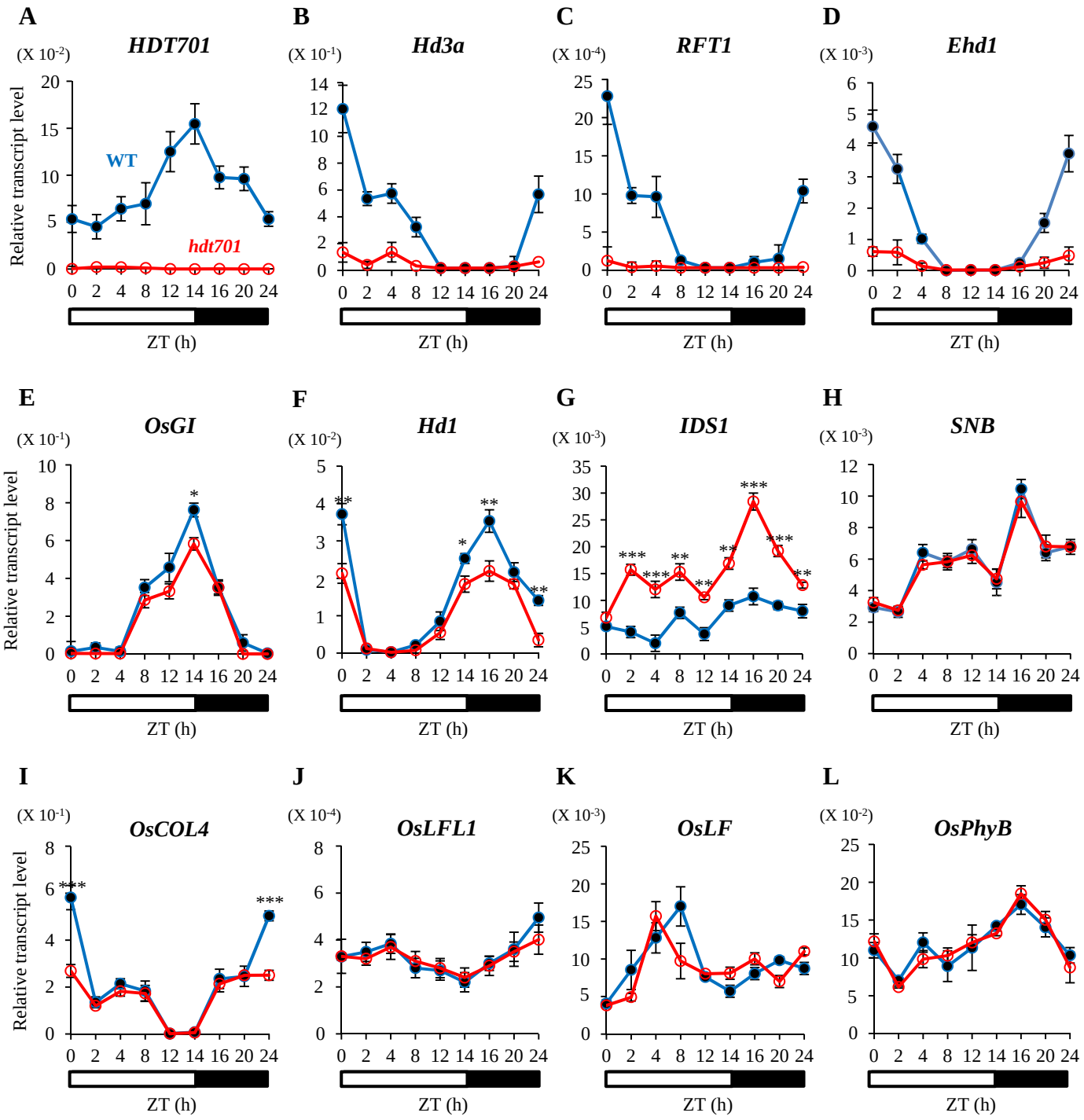
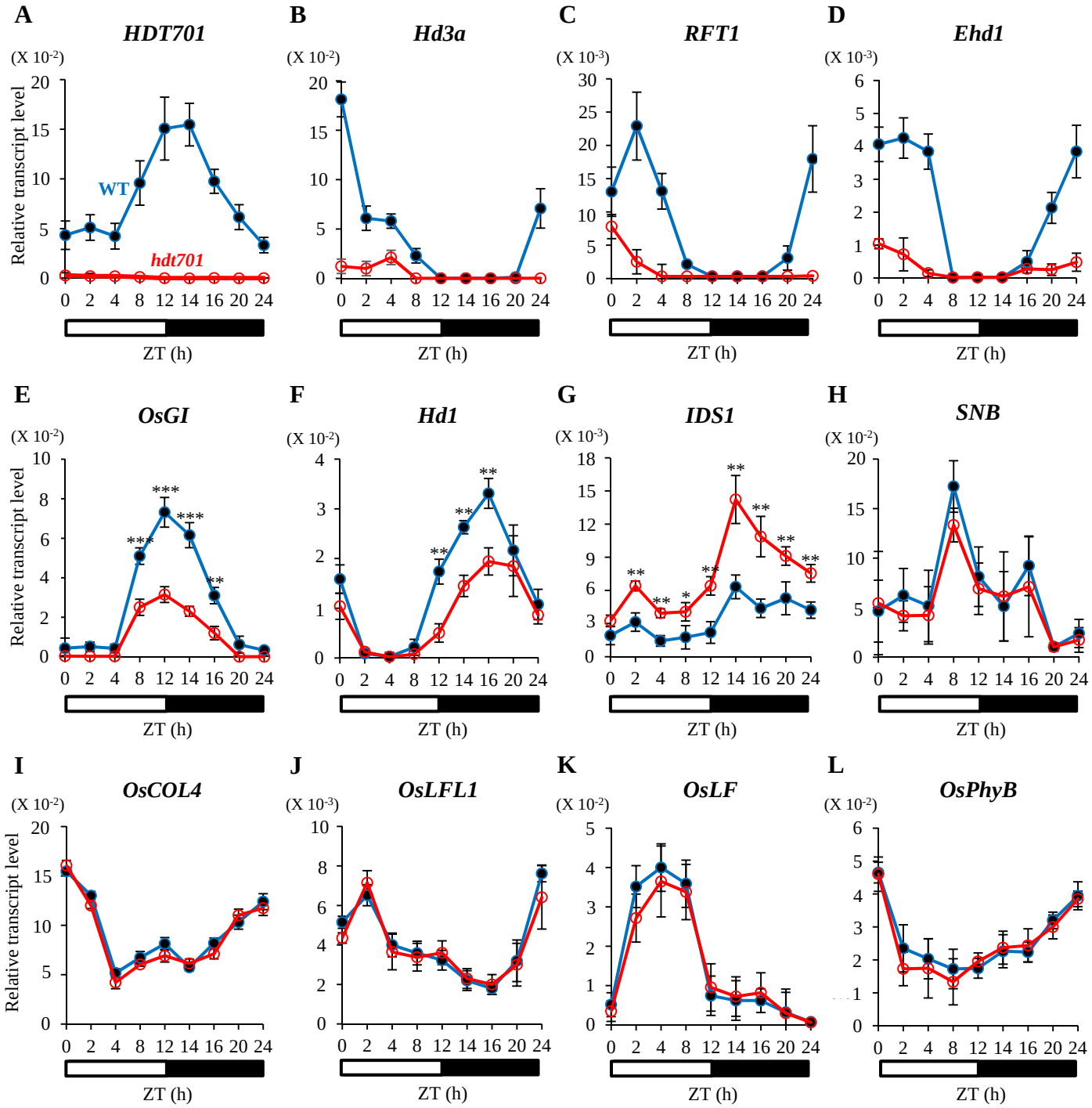
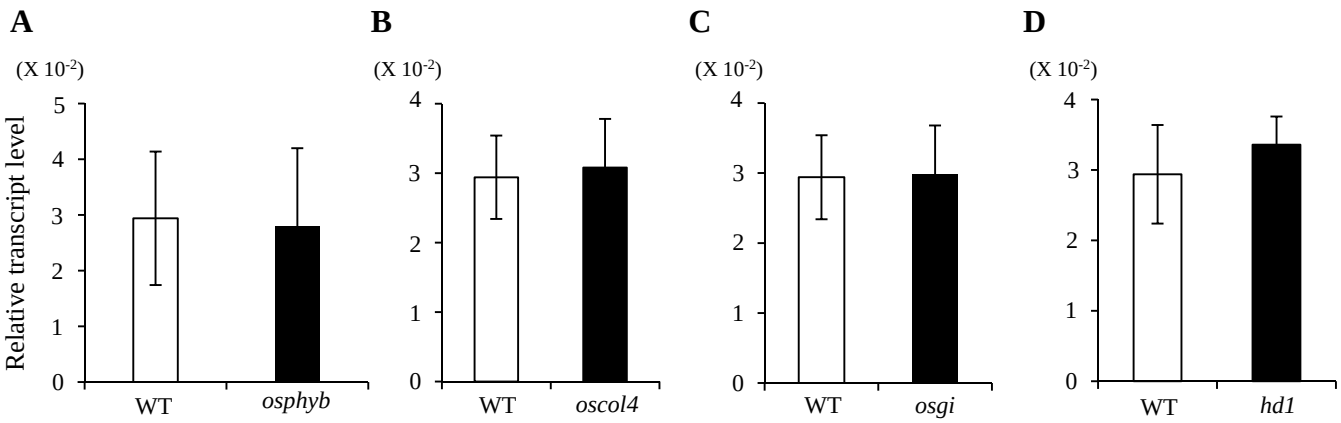



**Supplementary Fig. S1.** Independent biological replicates of diurnal expression patterns of floral regulators in leaf blades of WT and *hdt701-1* plants at 49 DAG under LD. Quantitative RT-PCR analyses of *HDT701* (A), *Hd3a* (B), *RFT1* (C), *Ehd1* (D), *OsGI* (E), *Hd1* (F), *IDS1* (G), *SNB* (H), *OsCOL4* (I), *OsLFL1* (J), *OsLF* (K) and *OsPhyB* (L). Close circles, WT; open circles, *hdt701-1*. y-axis, relative transcript level of each gene compared with that of rice *Ubi*. Error bars indicate standard deviations; *n* = 4 (technical replicates). Levels of significant difference are indicated by * (P <0.05), ** (P <0.01), and *** (P <0.005).




**Supplementary Fig. S2.** Independent biological replicates of diurnal expression patterns of floral regulators in leaf blades of WT and *hdt701-1* plants at 28 DAG under SD. Quantitative RT-PCR analyses of *HDT701* (A), *Hd3a* (B), *RFT1* (C), *Ehd1* (D), *OsGI* (E), *Hd1* (F), *IDS1* (G), *SNB* (H), *OsCOL4* (I), *OsLFL1* (J), *OsLF* (K) and *OsPhyB* (L). Close circles, WT; open circles, *hdt701-1*. y-axis, relative transcript level of each gene compared with that of rice *Ubi*. Error bars indicate standard deviations; *n* = 4 (technical replicates). Levels of significant difference are indicated by * (P <0.05), ** (P <0.01), and *** (P <0.005).




**Supplementary Fig. S3.** Independent biological replicates of expression levels of *HDT701* in *osphyb* (A), *oscol4* (B), *osgi* (C), and *hd1* (D). Total RNAs were isolated from leaf blades at 42 DAG under LD. Error bars display standard deviations; $n = 4$ (technical replicates).

**Supplementary Table S1.** List of primers used in this study.

| Name | Sequence (5'-3') | Purpose |
|---|---|---|
| *Ubi*_RT_F | TGAAGACCCTGACTGGGAAG | qRT-PCR |
| *Ubi*_RT_R | CACGGTTCAACAACATCCAG | |
| *HDT701*_RT_F | TAGCTCCGCCTCCCACCT | |
| *HDT701*_RT_R | CCGGCTGGGAAACTTTGTAG | |
| *OsGI*_RT_F | TGGAGAAAGGTTGTGGATGC | |
| *OsGI*_RT_R | GATAGACGGCACTTCAGCAGAT | |
| *Hd1*_RT_F | AACCAAGATCGGCAGTATGG | |
| *Hd1*_RT_R | GATTGATTGCTCCAGCAGGT | |
| *Ehd1*_RT_F | GTTGCCAGTCATCTGCAGAA | |
| *Ehd1*_RT_R | GGATGTGGATCATGAGACAT | |
| *Hd3a*_RT_F | AGCCCAAGTGACCCTAACCT | |
| *Hd3a*_RT_R | GTTGTAGAGCTCGGCGAAGT | |
| *RFT1*_RT_F | TGACCTAGATTCAAAGTCTAATCCTT | |
| *RFT1*_RT_R | TGCCGGCCATGTCAAATTAATAAC | |
| *OsCOL4*_RT_F | ATCCACTCGGCGAACCCGCT | |
| *OsCOL4*_RT_R | CGCTTCTCCCTGTACCGCAT | |
| *OsPhyB*_RT_F | ATGGAACAGACACAATGCTT | |
| *OsPhyB*_RT_R | AGCATACACCATATCAGCTT | |
| *OsIDS1*_RT_F | CTGGCCTCCAGTTAACTTGT | |
| *OsIDS1*_RT_R | GGCGCCGGCAGAGAATCCT | |
| *OsLF*_RT_F | AACCCTAGGGAATGGCAATG | |
| *OsLF*_RT_R | CGCCCAAATGCAAGTACAGT | |
| *OsLFL1*_RT_F | CAAAATGCACAACTCTGGACC | |
| *OsLFL1*_RT_R | ACCACTTCCCTGTCAGTCTCAC | |
| *SNB*_RT_F | ATGGAAGGGAAGCTGTTAC | |
| *SNB*_RT_R | AATGTGGATGCTGGGACATC | |
| *OsIDS1*_P1_F | CACGATTTCCTCCCTAACTA | ChIP |
| *OsIDS1*_P1_R | GCCCTGTTTAGTTCCCAAAT | |
| *OsIDS1*_P2_F | ACACATCCTAAAACGGCTGC | |
| *OsIDS1*_P2_R | CCATTGCCCTCCACTTCAAC | |
| *OsIDS1*_P3_F | ACTATCCAACAAGAGGGTAC | |
| *OsIDS1*_P3_R | GACACATGGCCATTCATATC | |
| *OsIDS1*_P4_F | CGGAAGCTCTAAAGAACGTT | |
| *OsIDS1*_P4_R | GACGTTGTCAAGGTGGTTAT | |
| *OsIDS1*_P5_F | CCTCTTCTTCTTCATCCAAC | |
| *OsIDS1*_P5_R | AGTGAGTCGTCGTCAGTCGA | |
| *SNB*_P1_F | GAAACTACACCGGTGGATAT | |
| *SNB*_P1_R | TGACATGATGTATCTGCAGG | |
| *SNB*_P2_F | GTTTGCTCCTTTGATATTTATA | |
| *SNB*_P2_R | TGAAGTCTAACTCAGCTTCTG | |
| *SNB*_P3_F | GGAATATTATGGAATGGTGGAA | |
| *SNB*_P3_R | TAAGCTAACGGGCAAACGAT | |
| *SNB*_P4_F | AGCCAACAATGCTAGCTTAG | |
| *SNB*_P4_R | TCGACTTATAACACGGTTGG | |
| *SNB*_P5_F | GCAATGTCGAGTGGAAAATAC | |
| *SNB*_P5_R | CTTGAAAGAGTTTGATTTTGACC | |
| *SNB*_P6_F | ACCTGAAGCAGTTTAACTTTGAT | |
| *SNB*_P6_R | GAGTGTGCTATGCTTTGTTTG | |
| *HDT701*_OX_HindIII_F | AAGCTTTAGCTCCGCCTCCCACCT | Transgenic plants |
| *HDT701*_OX_SpeI_R | ACTAGTCTTGGCGGGGTGCTTGGC | |
| *HDT701*_CRISPR_F | GGCAAAAGATCATTCCAGCTCCCA | |
| *HDT701*_CRISPR_R | AAACTGGGAGCTGGAATGATCTTT | |