



**Table S1.** Primers used in this study.

Gene	Forward (5' - 3')	Reverse (5' - 3')
<i>EL1-RE</i>	CATGAGATCTATGCCAGAGTTGCGGGGTGGTGT	TCGGCTCGAGTCAGCATACGGTCCGGCCGTAGC
<i>OsLHYc-RE</i>	CATATGGACACCAAACCTGCCGCAG	GCGGCCGCTGTGATGCTTCGCTC
<i>PRR37n</i>	ATGATGGGAACCGCTCATCA	CTTTTGTGTCTGAATGCCAC
<i>PRR37m</i>	TGTGCCAAATCAAAAAGTGG	TGACTTCATGTTGTAAGCAG
<i>PRR37c</i>	AACTCAGATGCTGCACCAAT	TCTGTCCGCTGCCGCTTCGC
<i>ELF3</i>	ATGAAGAGAGGGAAAGATG	TTAAGGCTTAGAGGAGTCA
<i>ELF4</i>	ATGAAGAGGAACGGCGAG	TTAAGCTCTAGTTCCGGC
<i>EL1</i>	ATGCCAGAGTTGCGGGGTGGTGT	TCAGCATACGGTCCGGCCGTAGC
<i>Hd6</i>	ATGTCGAAGGCGAGGGTCTACGC	TCATTGTGGTCGTGCTCTGCTAT
<i>PRR37</i>	ATGATGGGAACCGCTCATCACAA	TCATCTGTCCGCTGCCGCTTCGC

**Table S2.** Heading dates of the different genotypes in *PRR37*, *Ghd7*, *Hd6* and *Hd16*.

Genotype	Heading date genes				Days to heading <sup>b</sup>			PS <sup>d</sup>	References
	<i>PRR37</i>	<i>Ghd7</i>	<i>Hd6</i>	<i>Hd16</i>	NLD	LD <sup>c</sup>	SD <sup>c</sup>		
Iburiwase	- <sup>a</sup>	-	+	+	75	n.d.	n.d.		
Hoshiniyume	-	-	-	+	75	84	69	15	Fujino et al. (2013)
H143	-	-	+	-	75	71	60	11	Koo et al. (2013)
Koshihikari	+	+	-	-	105	92	71	21	
Milyang23	+	+	+	+	117	122	85	37	Koo et al. (2013)
Dongjin	+	+	+	+	121	113	76	37	Koo et al. (2013)
<i>prp37</i> -KO	-	+	+	+	113	93	70	23	Koo et al. (2013)

<sup>a</sup> + and - indicate functional and nonfunctional alleles of each gene, respectively.

<sup>b</sup> Seeds were sown in the seed beds in the greenhouse on 2 May 2013 and transplanted to the paddy field on 1 June 2013. Plants were grown under natural LD (NLD) conditions since the mean day lengths in Suwon, South Korea (37° N latitude) are 13.5 h in mid-April, 14.2 h in May, 14.7 h in June, 14.3 h in July, and 13.6 h in August. The rice cultivation followed the normal agricultural practice in the paddy field.

<sup>c</sup> Days to heading of genotypes in long-day (LD; 14~14.5 h light/day) and short-day (SD; 10 h light/day) conditions in the growth chambers were obtained from the references. In addition to Koo et al. (2013), data of 'Koshihikari' were obtained from our growth chamber conditions. The heading dates of the Japanese cultivar 'Iburiwase' have not been reported.

<sup>d</sup> Photoperiod sensitivity (PS): days of (LD – SD). n.d., not determined; KO, knockout.