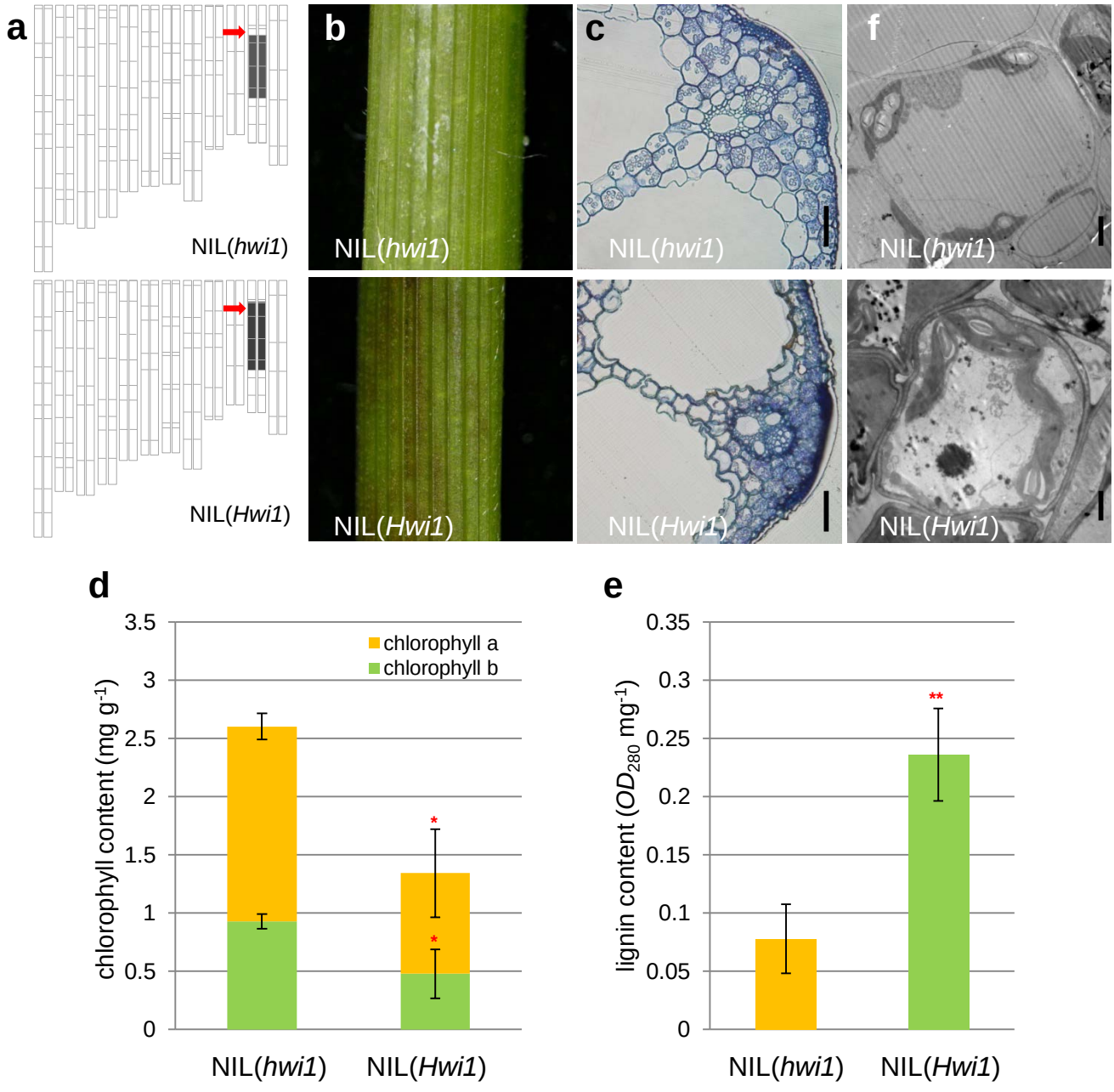
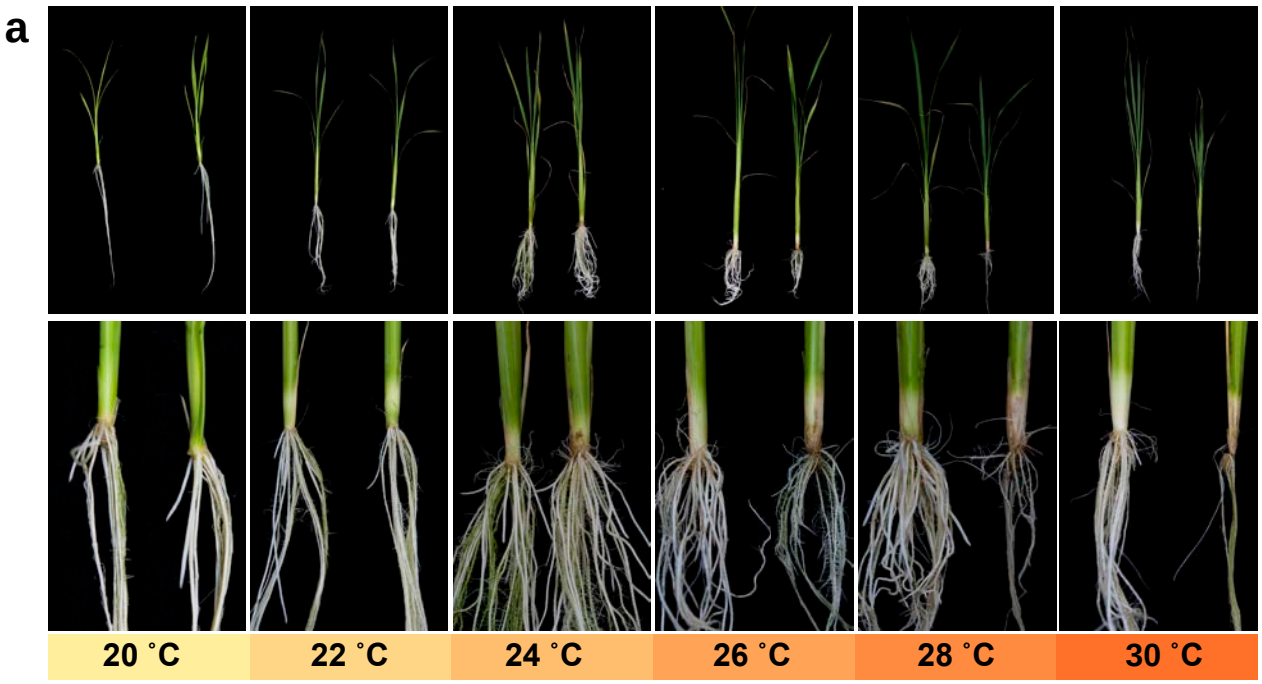
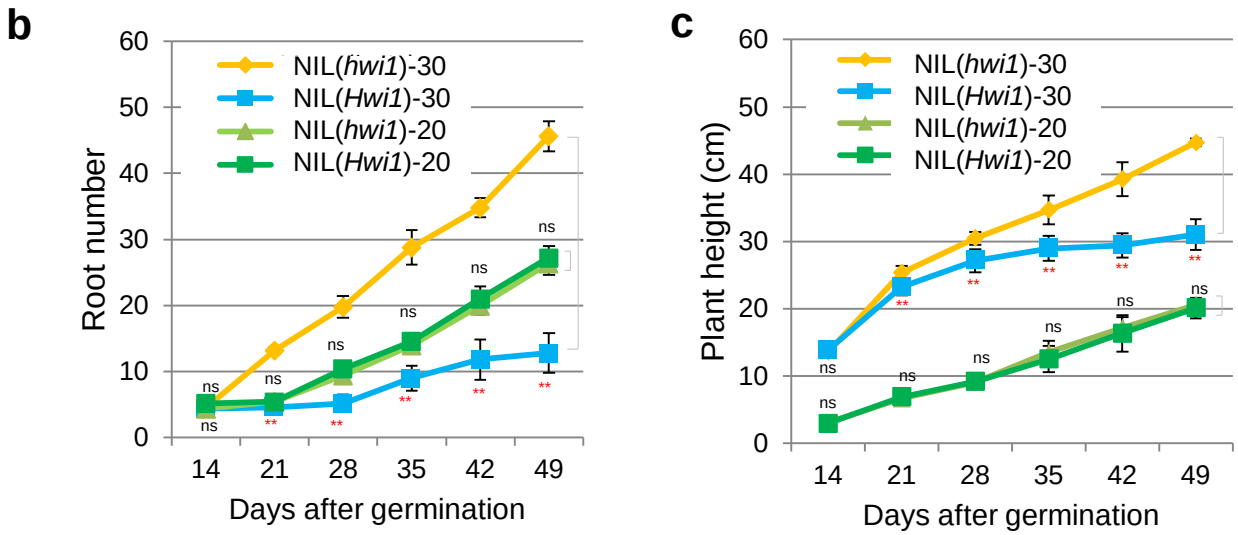
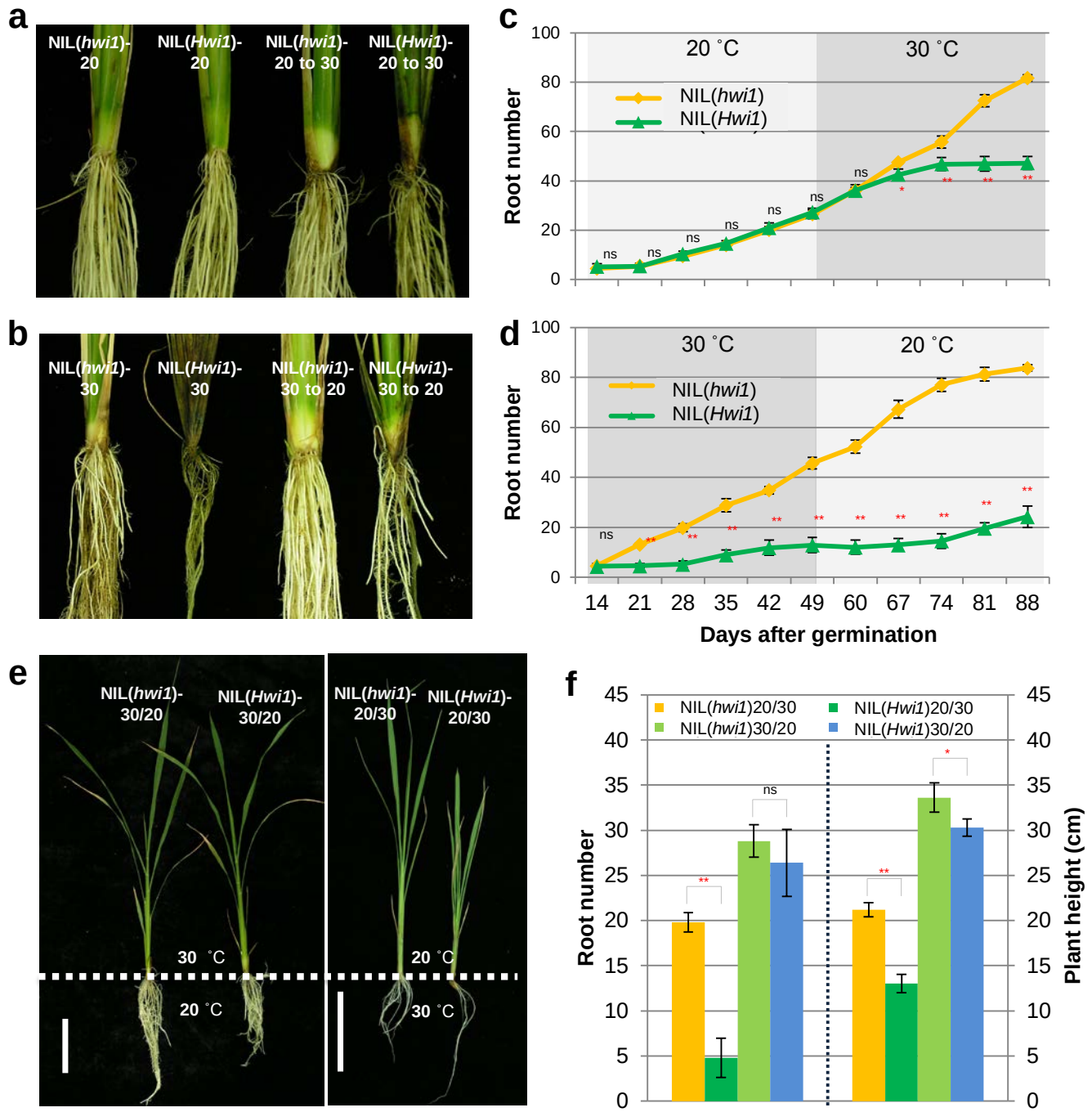


Supplementary Figure 1. **Morphological and physiological characteristics of the leaf sheath of NIL(*hwi1*) and NIL(*Hwi1*).** (**a**) Diagrams showing the genotype of NIL(*hwi1*) (upper panel) and NIL(*Hwi1*) (lower panel). Open bars indicate Teqing chromosomes; black bars indicate the introgression segments from wild rice; markers for genotyping are shown as grey horizontal lines; red arrows indicate the location of *Hwi1*. (**b**) Morphology of the leaf sheath of NIL(*hwi1*) (upper panel) and NIL(*Hwi1*) (lower panel). (**c**) Cross sections of the leaf sheath of NIL(*hwi1*) (upper panel) and NIL(*Hwi1*) (lower panel). Scale bar, 50 μm. (**d**) Chlorophyll content of leaf sheaths. (**e**) Lignin content of leaf sheaths. (**f**) Parenchymal cells from leaf sheath of NIL(*hwi1*) (upper panel) and NIL(*Hwi1*) (lower panel). Scale bar, 2 μm. Error bars in (**d**) and (**e**) indicate standard deviation, n=3. * and ** indicate significant difference determined by the t-test at $p<0.05$ and $p<0.01$, respectively.

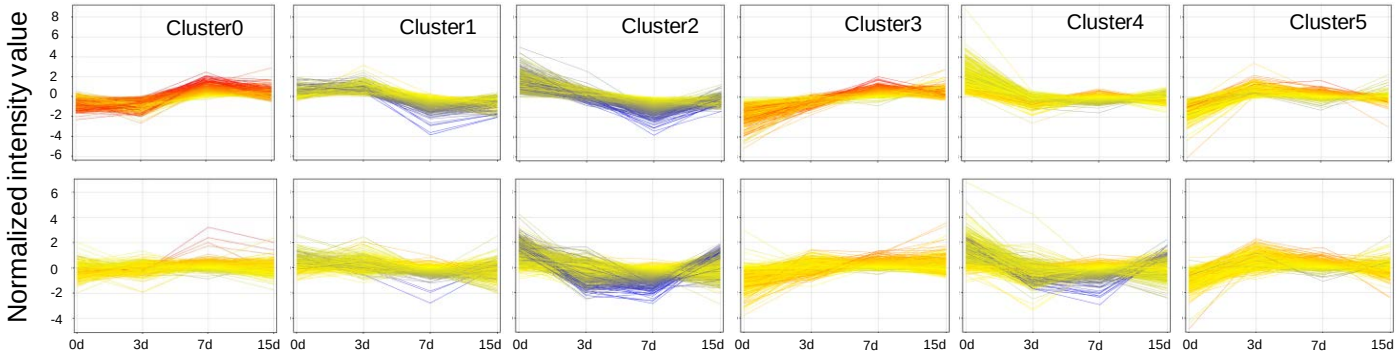




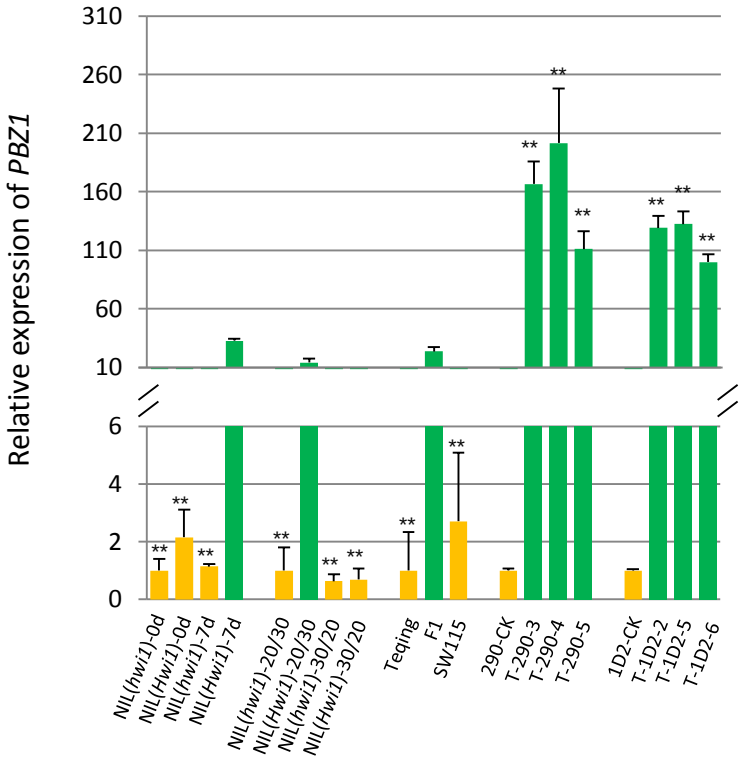
Supplementary Figure 2. Effect of temperature on inducing the expression of hybrid weakness. (**a**) Morphology of NIL(*hwi1*) (left in each picture) and NIL(*Hwi1*) (right in each picture) under various temperature conditions. Upper panels show the phenotypes of whole plants, lower panels show the amplifications of basal nodes and roots. (**b, c**) Time-course measurements of root number (**b**) and plant height (**c**) of 30˚C-incubated plants. Error bars indicate standard deviation, $n = 15$. **, significant difference determined by the *t*-test at $p<0.01$; ns, not significant.



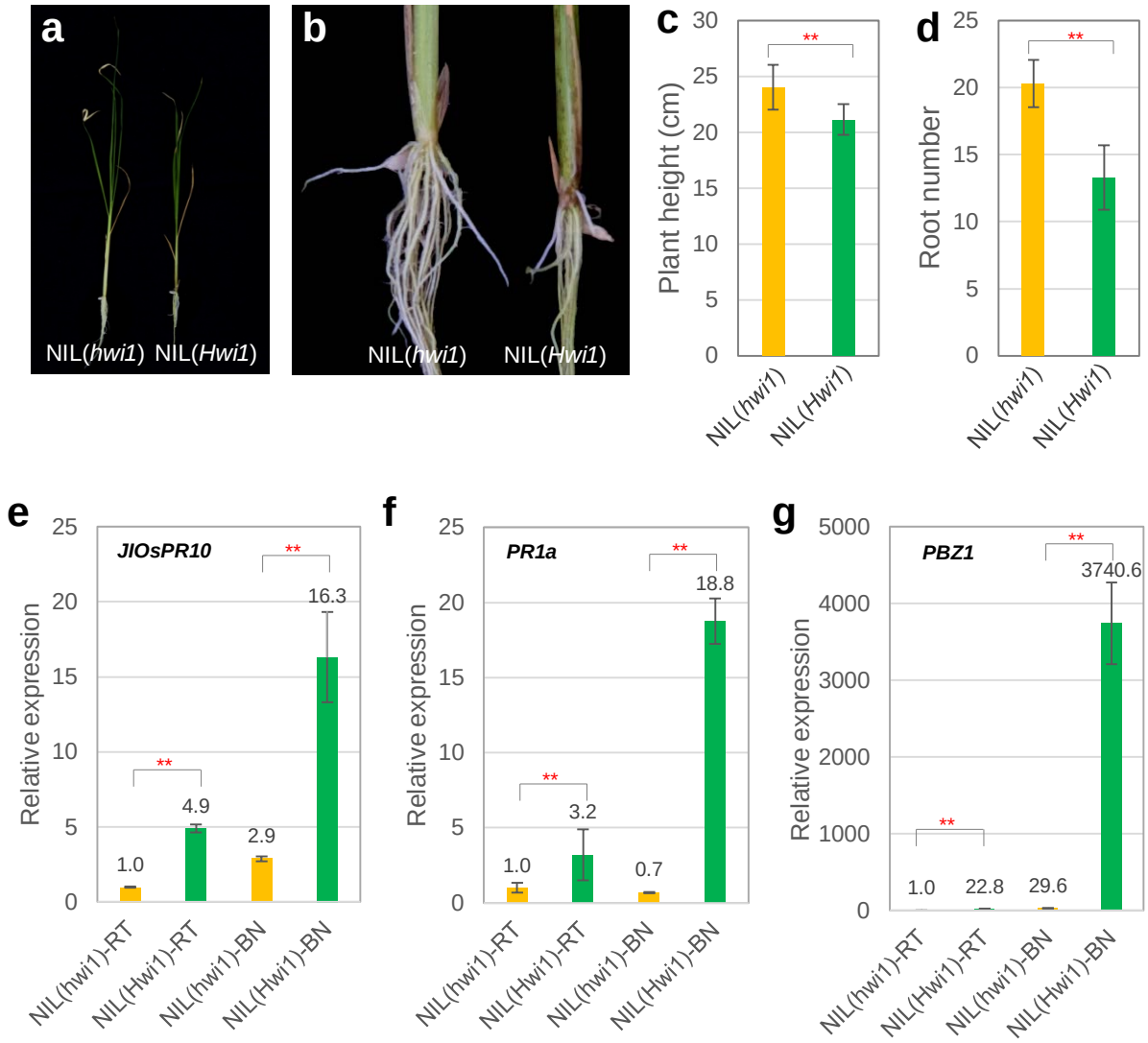
Supplementary Figure 3. **Temperature shift experiment and different root/shoot temperature treatment assay.** (**a, b**) Phenotypes of 88-day-old NIL(*hwi1*) and NIL(*Hwi1*) plants grown under consistent or shifted temperature conditions. “20” and “30” indicate that plants were grown under consistent 20˚ C and 30˚ C conditions. “20 to 30” and “30 to 20” indicate that the temperature was changed from 20˚ C to 30˚ C or from 30˚ C to 20˚ C at 7 weeks after germination. (**c, d**) Time-course analysis of root number of NIL(*hwi1*) and NIL(*Hwi1*) in response to temperature-shift treatment. Light and dark grey backgrounds indicate consistent 20˚ C and 30˚ C growing conditions in the temperature-shift experiments. (**e, f**) Phenotypes of 30-day-old NIL(*hwi1*) and NIL(*Hwi1*) seedlings incubated under different above- and under-ground temperature conditions. “30/20” and “20/30” indicate aboveground/underground temperatures of 30˚ C/20˚ C and 20˚ C/30˚ C, respectively; scale bar = 5cm in (**e**). Error bars in (**c**), (**d**) and (**f**) indicate the standard deviation, $n = 10$. * and ** indicate significant difference determined by the *t*-test at $p<0.05$ and $p<0.01$, respectively; ns, not significant.



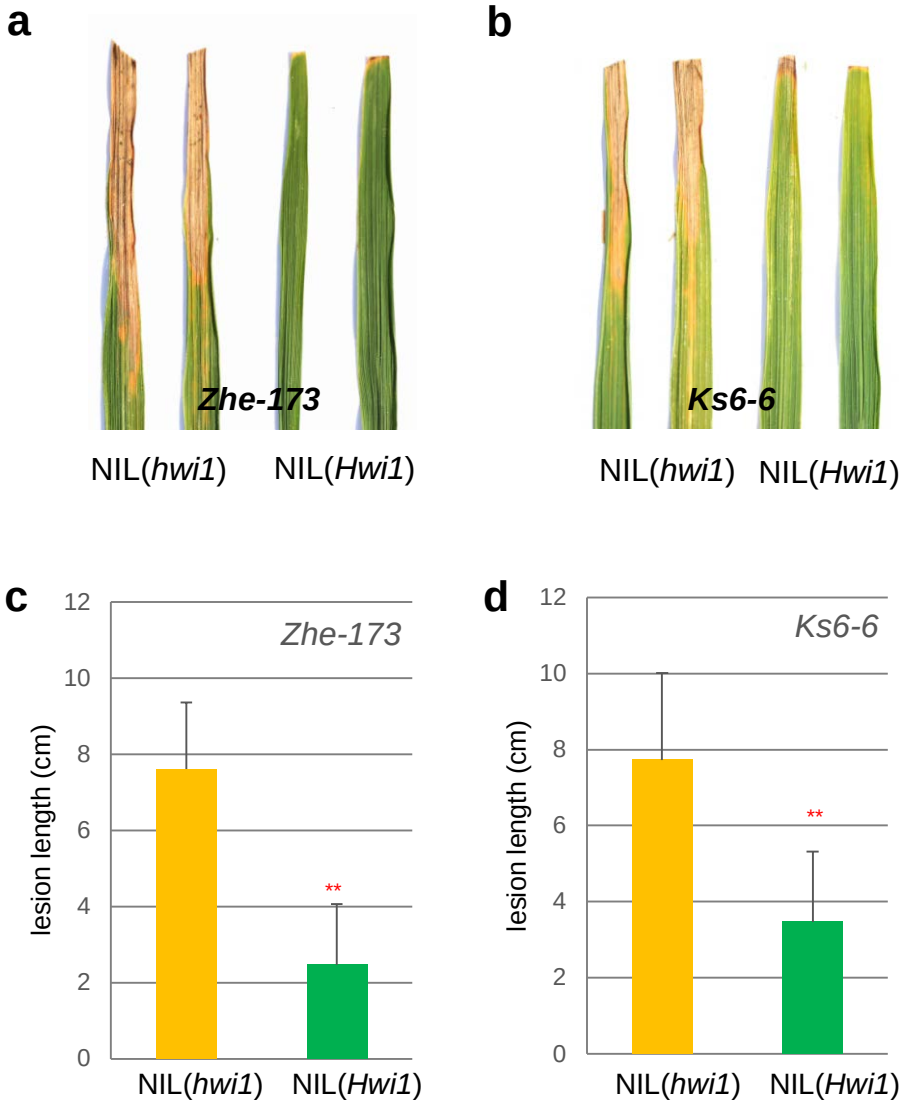
Supplementary Figure 4. **K-means analysis of differentially expressed genes.** Clusters of differential expressed genes in the basal nodes of NIL(*Hwi1*) (upper panels) and the expression of corresponding genes of each cluster in NIL(*hwi1*) (lower panel).



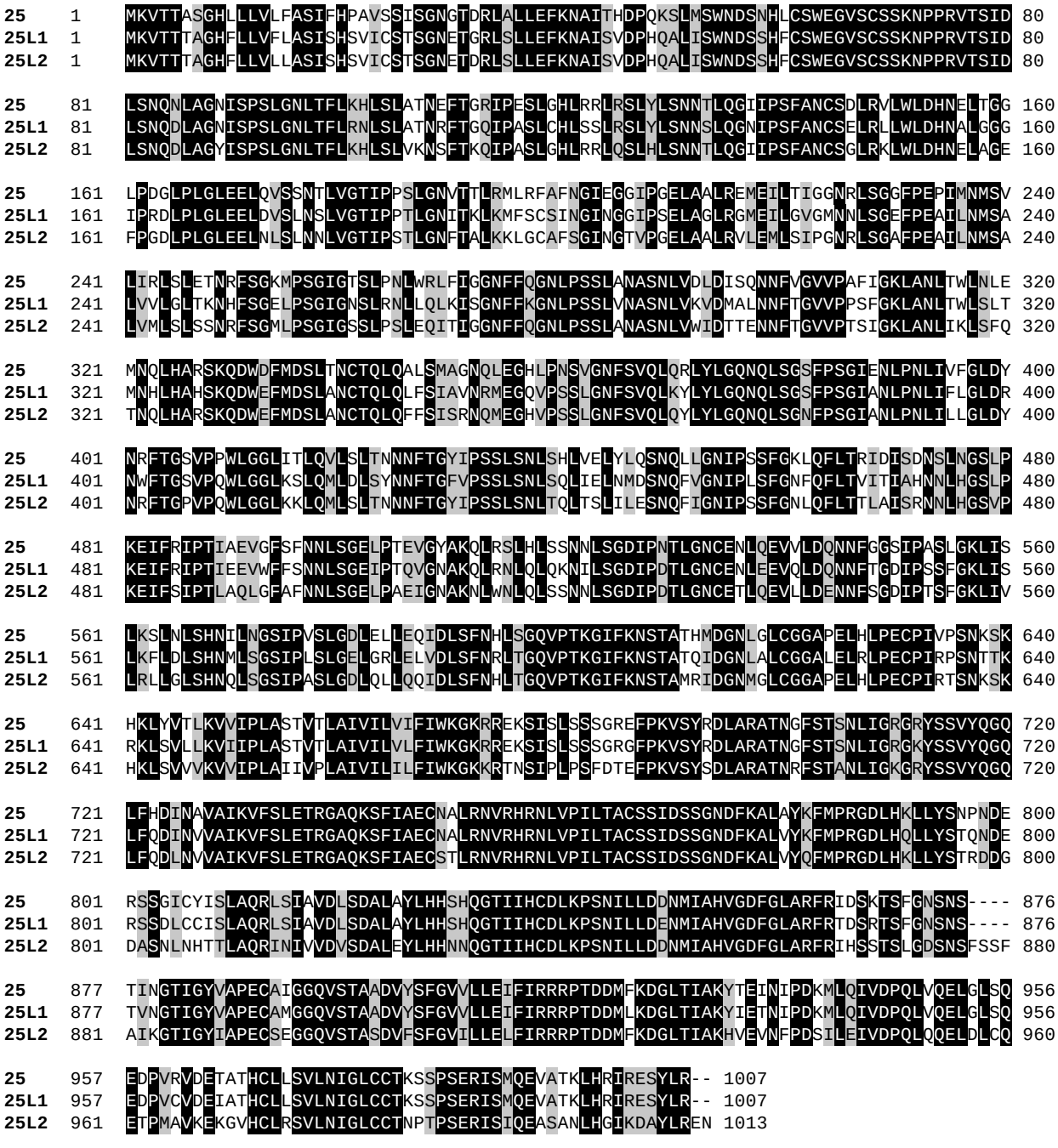
Supplementary Figure 5. **Activation of *PBZ1* associates with the expression of hybrid weakness.** 0d and 7d indicate the zero-point and 7 days after switching from 20° C to 30° C; 20/30 and 30/20 indicate aboveground/underground temperatures of 20° C/30° C and 30° C/20° C, respectively; F1 indicates the F1 hybrids of Teqing and SW115; T-290s and T-1D2s are independent transgenic lines with the Teqing allele of *Hwi2* in the HW background and with the wild rice allele of *Hwi1* in the Teqing background, respectively. Plants showing weakness syndrome are labelled in green. Error bars indicate standard deviation, n=3. **, indicates significant difference between the corresponding weakness plants and the normal control plants determined by the t-test at p<0.01.



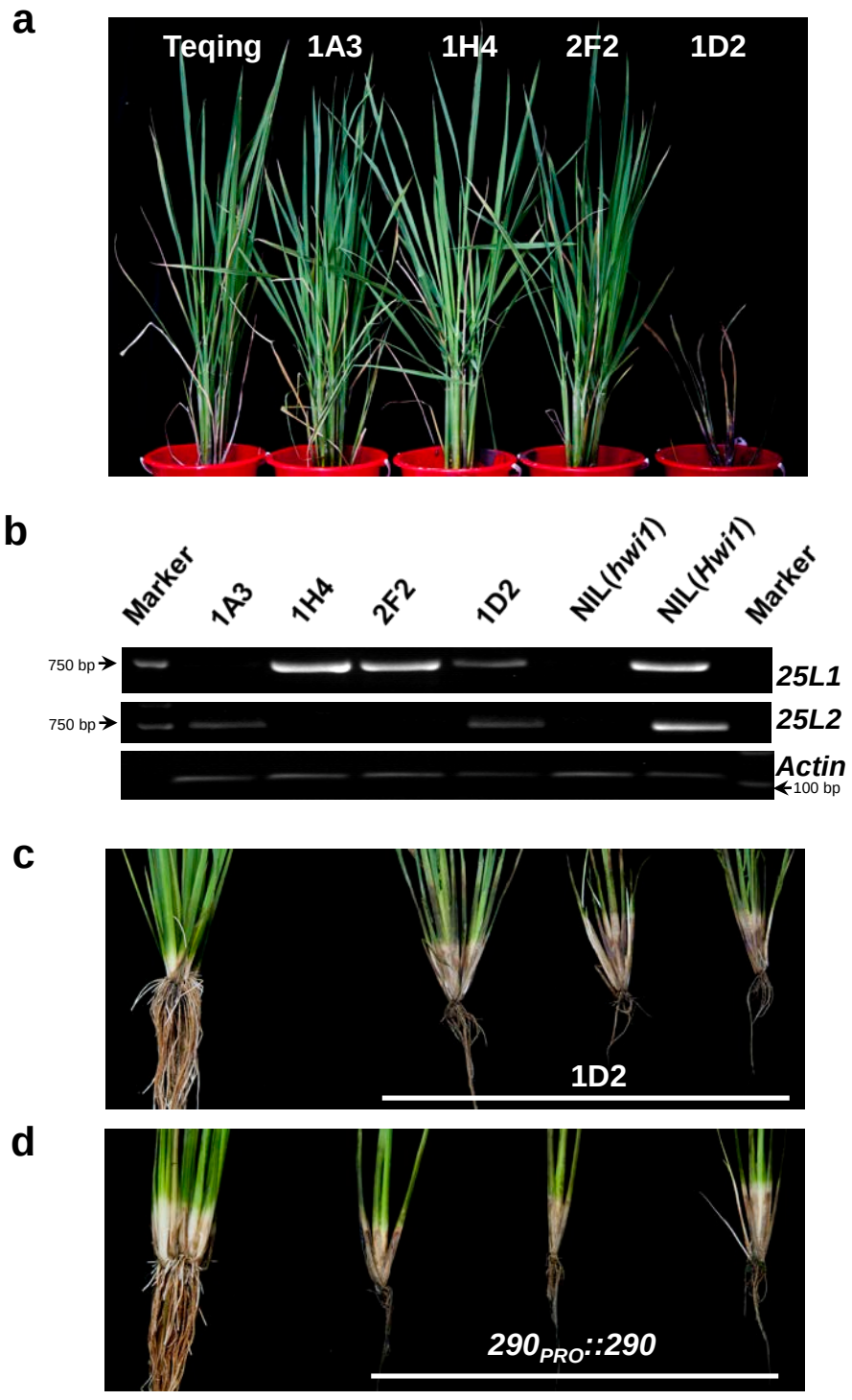
Supplementary Figure 6. Phonotypical characterization and *PR* genes expression in sterile growth condition. (**a-d**) Phenotypes of NIL(*hwi1*) and NIL(*Hwi1*) grown in sterile medium. **, significant difference determined by the *t*-test at $p<0.01$; error bars indicate standard deviation; $n=10$. (**e-g**) Relative expression of *PRs* in sterilely grown NIL(*hwi1*) and NIL(*Hwi1*). RT, root; BN, basal nodes; **, significant difference determined by the *t*-test at $p<0.01$; error bars indicate standard deviation; $n=3$.



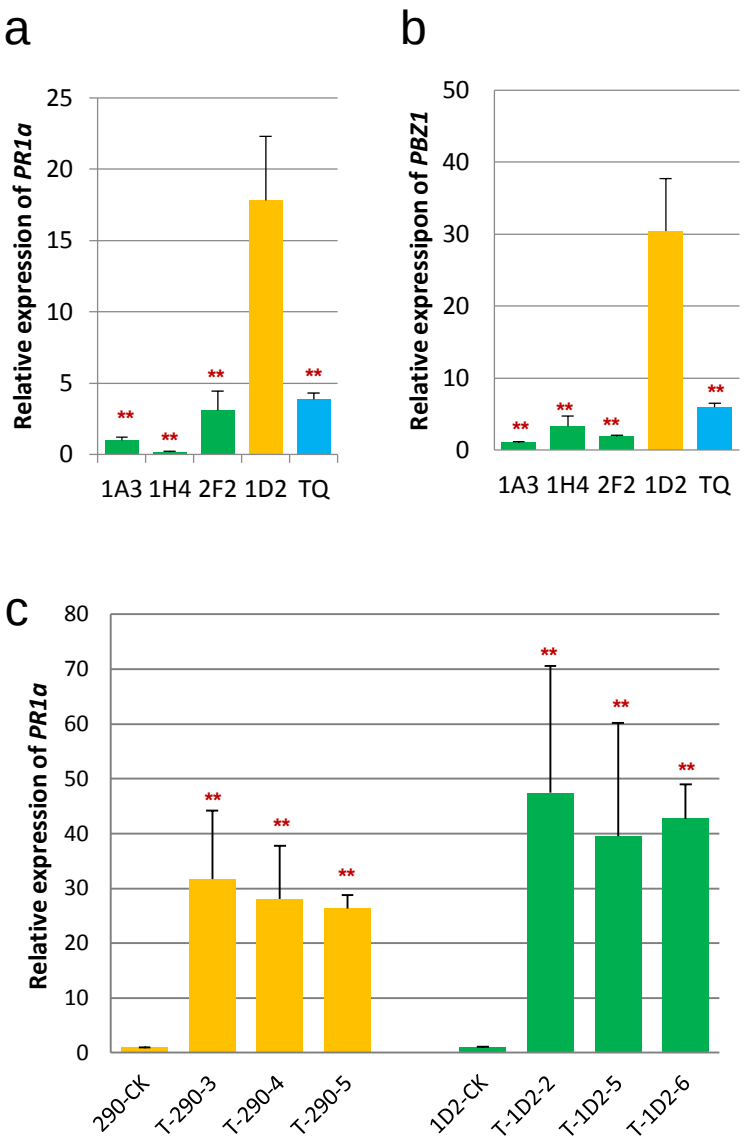
Supplementary Figure 7. Inoculation assay at tillering stage. (**a,b**) Phenotype of infected leaves of NIL(*Hwi1*) and NIL(*hwi1*) after 1-week inoculation of *Xoo* strains Zhe-173 (**a**) and Ks6-6 (**b**). (**c, d**) Lesion length of infected leaves. Error bars indicate standard deviation, n = 15. **, significant difference determined by the t-test at $p<0.01$.



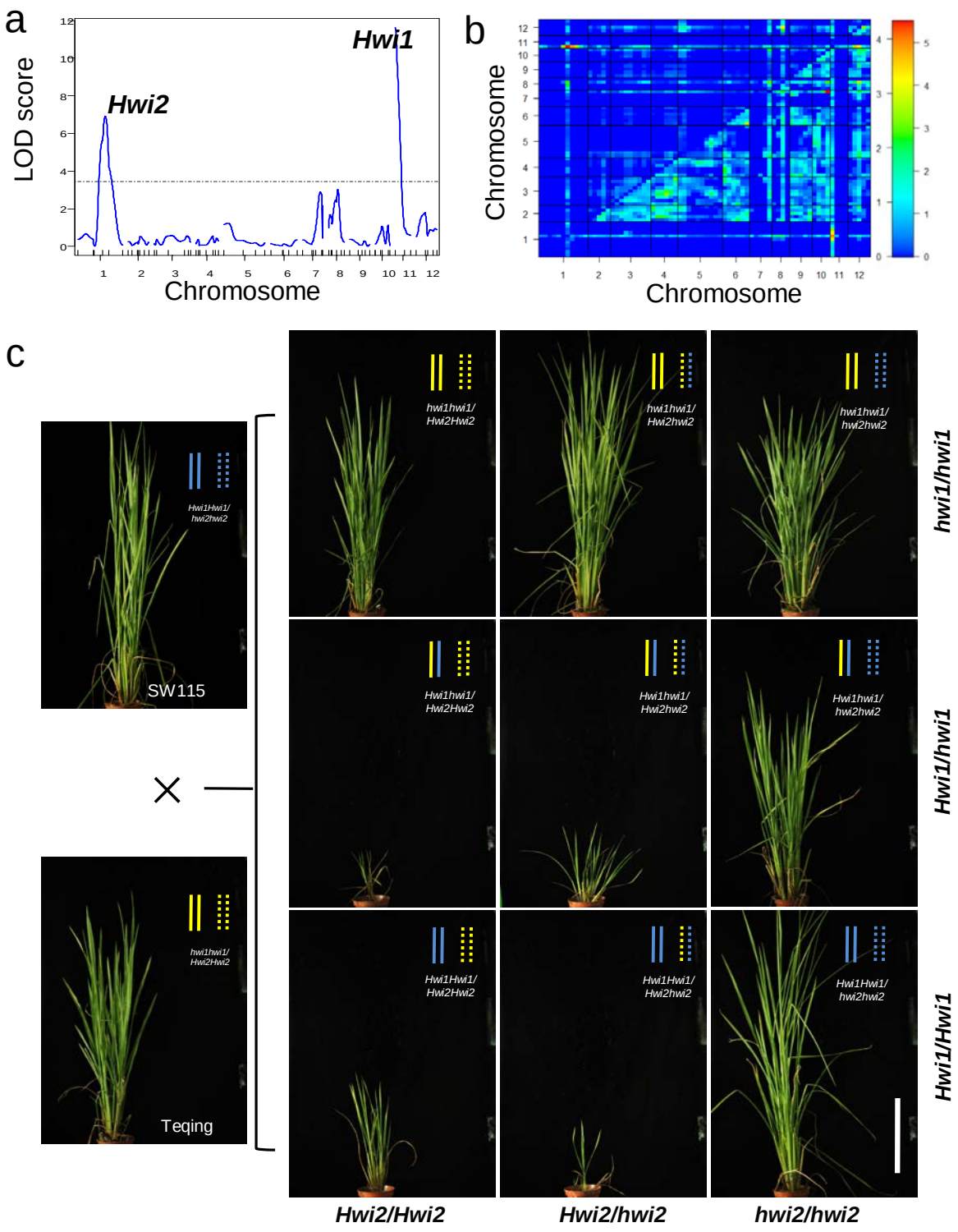
Supplementary Figure 8. Amino acid sequence alignment of *LOC_Os11g07225* (abbreviated to *25*), *LOC_Os11g07225-like 1* (abbreviated to *25L1*) and *25L2*.



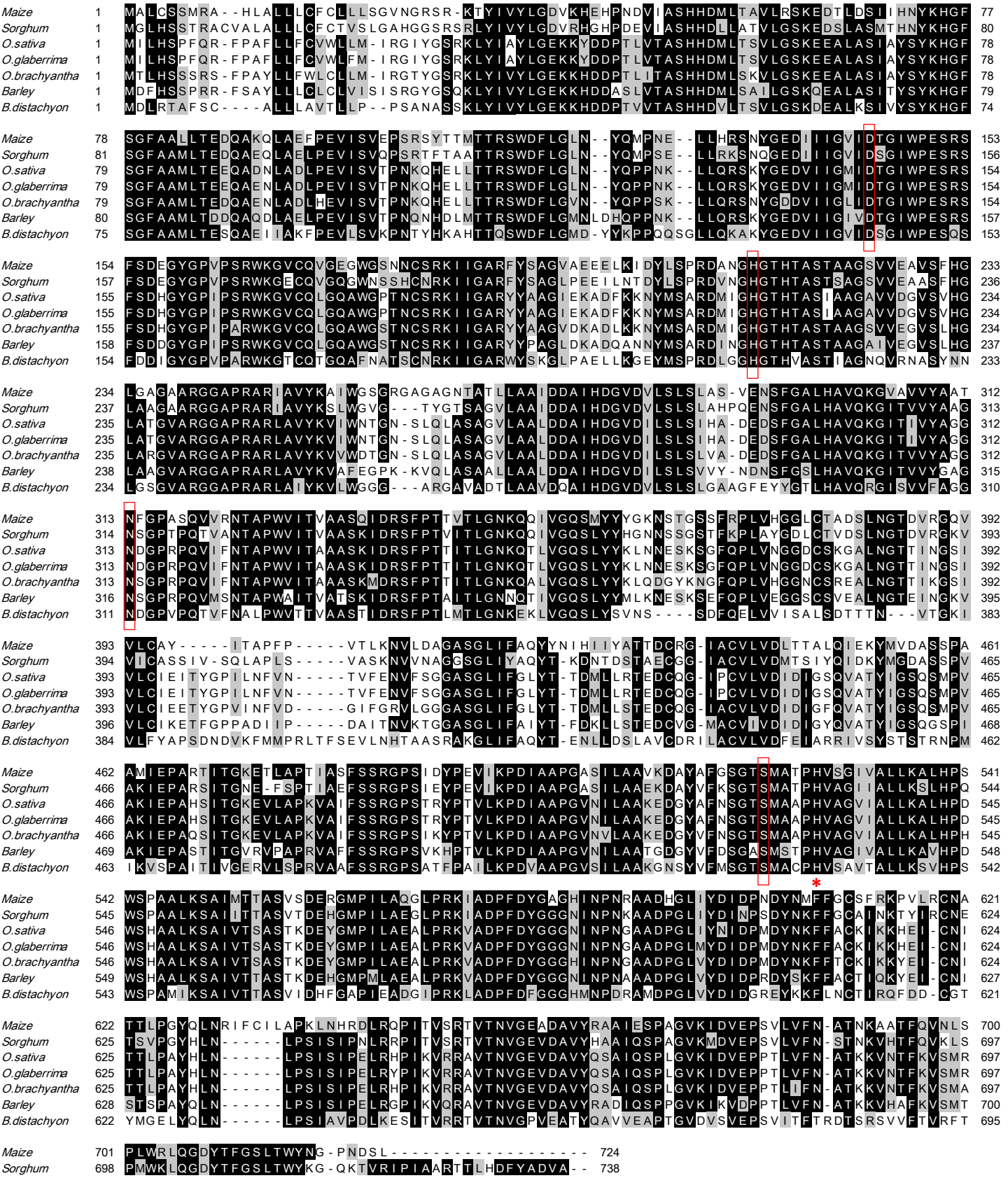
Supplementary Figure 9. Complementation tests of *Hwi1* and *Hwi2*. (**a**) Phenotypes of transformants with different genomic segments subcloned from wild rice BAC. (**b**) The expression of *25L1*, *25L2* in different transgenic lines. Marker sizes were labeled on left or right. (**c, d**) Morphologies of basal nodes and roots of *Hwi1* (**c**) and *Hwi2* (**d**) complemented transformants with the 1D2 segment from wild rice and the native promoter-driven 290 genomic sequence, respectively.



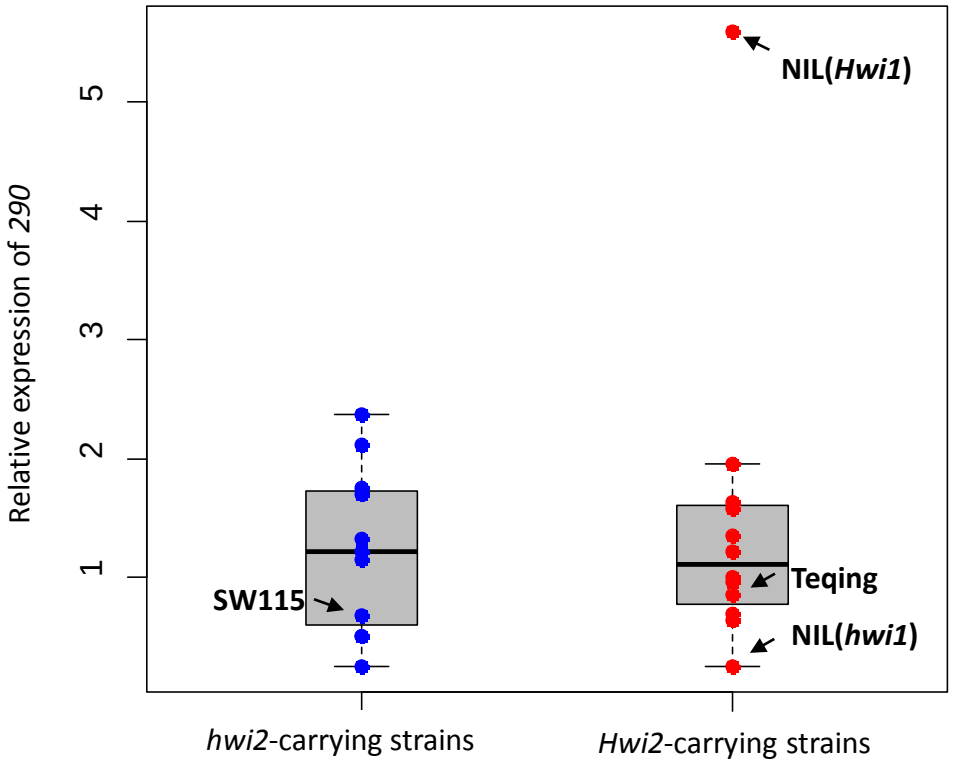
Supplementary Figure 10. The expression of *PRs* in transgenic lines. (**a, b**) The expression of *PR1a* (**a**) and *PBZ1* (**b**) in transformants carrying different wild rice segments at the *Hwi1* locus. Error bars indicate standard deviation, $n = 3$. ** indicates significant difference between the transgenic plants with and without weakness syndrome that determined by the *t*-test at $p<0.01$. (**c**) The expression of *PR1a* in independent *290* and 1D2 complementation lines. Error bars indicate standard deviation, $n = 3$. ** indicates significant difference between the weakness transgenic plants and the corresponding control that determined by the *t*-test at $p<0.01$. Yellow color indicates the *290PRO::290* transgenic lines and the control; green colour indicates the 1D2 transgenic lines and the control.



Supplementary Figure 11. QTL mapping and genetic verification of *Hwi2*. (**a**) QTL mapping using 96 individuals in an F_2 population derived from a cross between NIL(*Hwi1*) and Zhonghua 11 (*O. sativa* ssp. *japonica*) revealed two loci regulating the expression of hybrid weakness. Dashed line delineates the significance threshold (p = 0.05, simulated by 1,000 permutations); tick marks on the X-axis indicate marker positions. (**b**) Heat map of two-dimensional genome scan with a two-QTL model for maximum joint LOD (upper triangle) and interaction LOD (lower triangle) scores. Colour-coded scale indicates values for epistatic interaction on the left and joint LOD score on the right. (**c**) Phenotypes of different genotype individuals in Teqing/SW115-derived F_2 population. Plants shown in the same row and column share the same genotype at the *Hwi1* and *Hwi2* locus, respectively.



Supplementary Figure 12. Amino acid sequence alignment of Hwi2 homologues in cereal. The conserved amino acid residues in the catalytic triad are boxed in red. H^{531} is labelled with a star.



Supplementary Figure 13. Box-and-whisker plot of the *290* expression in the basal nodes of *hwi2*- and *Hwi2*-carrying strains. The dots indicate the mean of relative expression level of three biological replicates of different strains. *hwi2*-carrying strains were indicated in blue, from top to bottom were Shuangkezao, Jiangxisimiao, Zhenshan 97, Lemnont, Nipponbare, Jiao 1, Taiguoxiangmi, Zhaiyeqing, SW115, 9311 and Zhonghua 11, respectively. *Hwi2*-carrying strains were indicated in red, from top to bottom were NIL(*Hwi1*), Minghui 63, Chenglongshuijingmi, Huanghuazhan, Tesan'ai, Amol, Fengaizhan, IR29, Teqing, Zhong 4188, Miyang and NIL(*hwi1*), respectively. SW115, Teqing, NIL(*hwi1*) and NIL(*Hwi1*) were marked with arrows. The upper hinge, black central line and lower hinge of the boxes indicate 75th (Q3), 50th and 25th (Q1) percentiles, respectively. The "1.5 rule", which defined the values less than Q1-1.5*(Q3-Q1) or more than Q3+1.5*(Q3-Q1) as the outliers, was adopted for outliers filtration. The upper and lower whiskers indicate the maximum and minimum value after outliers filtration.

Supplementary Table 1. Gene Ontology (GO) analysis of cluster 0 and cluster 3

GO term	Ontology	Description		Cluster0			Cluster3	
			Number in BG/Ref	Number in input list	*p* -value	FDR	Number in input list	*p* -value	FDR
GO:0051704	P	multi-organism process	229	9	0.00037	0.0078			
GO:0009607	P	response to biotic stimulus	174	10	7.40E-06	0.00031			
GO:0051707	P	response to other organism	159	8	0.00015	0.0033			
GO:0019538	P	protein metabolic process	2770	43	0.0017	0.034			
GO:0044267	P	cellular protein metabolic process	2166	40	0.0001	0.0024			
GO:0006519	P	cellular amino acid and derivative metabolic process	1105	21	0.0025	0.044			
GO:0009069	P	serine family amino acid metabolic process	538	13	0.0022	0.04			
GO:0034641	P	cellular nitrogen compound metabolic process	459	16	1.20E-05	0.00044	19	5.40E-06	0.00042
GO:0043412	P	macromolecule modification	1406	39	1.00E-08	5.00E-07	35	9.30E-05	0.004
GO:0006793	P	phosphorus metabolic process	1206	36	5.80E-09	3.20E-07	31	0.00013	0.004
GO:0006464	P	protein modification process	1359	39	4.30E-09	3.20E-07	34	0.0001	0.004
GO:0006796	P	phosphate metabolic process	1206	36	5.80E-09	3.20E-07	31	0.00013	0.004
GO:0043687	P	post-translational protein modification	1236	38	1.10E-09	1.20E-07	34	1.70E-05	0.0011
GO:0016310	P	phosphorylation	1080	36	3.50E-10	5.70E-08	29	9.80E-05	0.004
GO:0006468	P	protein amino acid phosphorylation	887	33	1.10E-10	3.80E-08	26	5.40E-05	0.003
GO:0016265	P	death	429	15	2.10E-05	0.00058	22	2.90E-08	2.80E-06
GO:0008219	P	cell death	429	15	2.10E-05	0.00058	22	2.90E-08	2.80E-06
GO:0012501	P	programmed cell death	419	15	1.60E-05	0.00053	22	1.90E-08	2.80E-06
GO:0006915	P	apoptosis	391	14	3.00E-05	0.00076	21	2.70E-08	2.80E-06

Supplementary Table 2. *Chi* test of segregation ratios of F_2 populations derived from crosses between SW115 and different germplasms

No.	Cross	Ecotype	Observed		Expected		$p_{(9:7)}$ *
			Weakness	Normal	Weakness	Normal	
F2-60	Fengaizha/SW115	*indica*	38	35	41	32	0.4700
F2-61	Huanghuazhan/SW115	*indica*	40	46	48	38	0.0687
F2-64	IR29/SW115	*indica*	82	68	84	66	0.6959
F2-65	SW115/Chenglongshuijing	*indica*	116	78	109	85	0.3197
F2-63	Teqing/SW115	*indica*	63	57	68	53	0.4076
F2-67	SW115/Teqing	*indica*	58	62	68	53	0.0804
F2-115	Amol/SW115	*indica*	67	47	64	50	0.5873
F2-116	Zhong4188/SW115	*indica*	70	50	68	53	0.6455
F2-118	Miyang/SW115	*indica*	38	22	34	26	0.2687
F2-119	Minghui/SW115	*indica*	47	35	46	36	0.8456
F2-66	SW115/Shuangkezao	*indica*	0				
F2-62	Niponbare/SW115	*japonica*	0				
F2-68	SW115/Jia1hao	*japonica*	0				
F2-69	Zhonghua11/SW115	*japonica*	0				
F2-112	93-11/SW115	*indica*	0				
F2-113	Zhenshan97/SW115	*indica*	0				
F2-114	Zhaiyeqing/SW115	*indica*	0				
F2-117	Jiangxisimiao/SW115	*indica*	0				

*, *p*- values of the *chi* -test if oberserve:expected fits 9:7

Supplementary Table 3. Distribution of *Hwi1* alleles in wild rice.

No.	Species	Original producing area	Latitude	Longitude	Ecotype	*Hwi1* locus
W0106	*O. rufipogon*	India	20.46	85.88	*Or-I*	9311-like
W0121	*O. rufipogon*	India	20.46	85.88	*Or-I*	9311-like
W0152	*O. rufipogon*	India	22.90	88.25	*Or-I*	9311-like
W0163	*O. rufipogon*	Thailand	18.81	98.66	*Or-II*	9311-like
W0164	*O. rufipogon*	Thailand	18.81	98.66	*Or-II*	9311-like
W0173	*O. rufipogon*	Thailand	15.87	100.99	*Or-I*	9311-like
W0176	*O. rufipogon*	Thailand	18.08	103.27	*Or-I*	9311-like
W0234	*O. rufipogon*	Thailand	18.08	103.27	*Or-II*	9311-like
W0590	*O. rufipogon*	Malaya	5.70	102.53	*Or-I*	9311-like
W0594	*O. rufipogon*	Malaya	3.14	101.69	*Or-II*	9311-like
W0596	*O. rufipogon*	Malaya	3.14	101.69	*Or-II*	9311-like
W0606	*O. rufipogon*	Malaya	6.00	102.25	*Or-II*	9311-like
W0626	*O. rufipogon*	Burma	19.77	96.11	*Or-I*	9311-like
W0627	*O. rufipogon*	Burma	19.77	96.11	*Or-I*	9311-like
W0635	*O. rufipogon*	Burma	19.77	96.11	*Or-II*	9311-like
W0638	*O. rufipogon*	Burma	14.08	98.20	*Or-I*	9311-like
W0639	*O. rufipogon*	Burma	19.77	96.11	*Or-I*	9311-like
W1080	*O. rufipogon*	India	27.00	88.40	*Or-I*	9311-like
W1086	*O. rufipogon*	India	27.00	88.40	*Or-I*	9311-like
W1090	*O. rufipogon*	India	26.15	91.74	*Or-I*	9311-like
W1092	*O. rufipogon*	India	26.15	91.74	*Or-I*	9311-like
W1117	*O. rufipogon*	India	26.82	94.17	*Or-I*	9311-like
W1556	*O. rufipogon*	Thailand	14.54	99.99	*Or-II*	9311-like
W1619	*O. rufipogon*	Thailand	14.50	100.89	*Or-I*	9311-like
W1675	*O. rufipogon*	India	20.29	86.01	*Or-I*	9311-like
W1677	*O. rufipogon*	India	20.29	86.01	*Or-I*	9311-like
W1685	*O. rufipogon*	India	20.14	85.47	*Or-I*	9311-like
W1696	*O. rufipogon*	Thailand	19.45	99.44	*Or-I*	9311-like
W1698	*O. rufipogon*	Thailand	14.34	100.59	*Or-I*	9311-like
W1718	*O. rufipogon*	China	NA	NA	*Or-II*	9311-like
W1719	*O. rufipogon*	China	NA	NA	*Or-I*	9311-like
W1721	*O. rufipogon*	China	NA	NA	*Or-I*	9311-like
W1723	*O. rufipogon*	China	NA	NA	*Or-I*	9311-like
W1724	*O. rufipogon*	China	NA	NA	*Or-III*	9311-like
W1736	*O. rufipogon*	India	26.92	75.82	*Or-II*	9311-like
W1737	*O. rufipogon*	India	26.92	75.82	*Or-I*	9311-like
W1739	*O. rufipogon*	India	26.92	75.82	*Or-III*	9311-like
W1794	*O. rufipogon*	Thailand	15.00	100.00	*Or-I*	9311-like
W1820	*O. rufipogon*	Bangladesh	23.71	90.41	*Or-I*	9311-like
W1839	*O. rufipogon*	China	NA	NA	*Or-I*	9311-like
W1844	*O. rufipogon*	China	NA	NA	*Or-III*	9311-like
W1850	*O. rufipogon*	Thailand	19.56	99.70	*Or-II*	9311-like
W1852	*O. rufipogon*	Thailand	20.28	100.09	*Or-I*	9311-like
W1880	*O. rufipogon*	Thailand	17.03	102.91	*Or-II*	9311-like
W1881	*O. rufipogon*	Thailand	17.03	102.91	*Or-I*	9311-like
W1884	*O. rufipogon*	Thailand	17.03	102.91	*Or-II*	9311-like
W1914	*O. rufipogon*	Thailand	14.95	103.75	*Or-I*	9311-like
W1921	*O. rufipogon*	Thailand	14.44	100.90	*Or-I*	9311-like
W1928	*O. rufipogon*	Thailand	15.29	100.18	*Or-I*	9311-like
W1935	*O. rufipogon*	Thailand	6.89	100.53	*Or-I*	9311-like
W1958	*O. rufipogon*	China	NA	NA	*Or-III*	9311-like

W1975	*O. rufipogon*	Indonesia	-2.99	104.76	*Or-II*	9311-like
W2053	*O. rufipogon*	Bangladesh	23.71	90.41	*Or-I*	9311-like
W2063	*O. rufipogon*	Bangladesh	22.82	89.55	*Or-I*	9311-like
W2308	*O. rufipogon*	Laos	17.57	102.38	*Or-II*	9311-like
W2310	*O. rufipogon*	Laos	17.51	102.36	*Or-II*	9311-like
W2316	*O. rufipogon*	Vietnam	10.39	107.02	*Or-I*	9311-like
W2318	*O. rufipogon*	Vietnam	10.24	106.06	*Or-II*	9311-like
W2319	*O. rufipogon*	Vietnam	10.33	106.25	*Or-I*	9311-like
W2320	*O. rufipogon*	Vietnam	10.42	105.36	*Or-II*	9311-like
W2331	*O. rufipogon*	Vietnam	21.03	105.85	*Or-I*	9311-like
W3003	*O. rufipogon*	China	22.19	112.31	*Or-II*	9311-like
W3009	*O. rufipogon*	China	22.89	112.85	*Or-III*	9311-like
W3021	*O. rufipogon*	China	23.87	113.53	*Or-III*	9311-like
W3024	*O. rufipogon*	China	23.87	113.53	*Or-III*	9311-like
W3026	*O. rufipogon*	China	23.64	115.17	*Or-III*	9311-like
W3060	*O. rufipogon*	China	18.75	109.17	*Or-III*	9311-like
W3068	*O. rufipogon*	China	18.65	109.80	*Or-II*	9311-like
W3072	*O. rufipogon*	China	19.62	110.70	*Or-II*	9311-like
W3074	*O. rufipogon*	China	19.62	110.70	*Or-III*	9311-like
W3083	*O. rufipogon*	China	22.10	100.79	*Or-III*	9311-like
W3089	*O. rufipogon*	China	22.10	100.79	*Or-II*	9311-like
W3091	*O. rufipogon*	China	26.80	113.55	*Or-II*	9311-like
W3093	*O. rufipogon*	China	25.28	111.34	*Or-III*	9311-like
W0103	*O. rufipogon*	India	20.48	85.85	*Or-I*	NB-like
W1795	*O. rufipogon*	Thailand	15.00	100.00	*Or-I*	NB-like
W1788	*O. rufipogon*	Thailand	15.00	100.00	*Or-I*	NB-like
W0107	*O. rufipogon*	India	20.95	85.10	*Or-I*	NB-like
W0123	*O. rufipogon*	India	20.46	85.93	*Or-I*	NB-like
W0124	*O. rufipogon*	India	21.00	85.10	*Or-I*	NB-like
W0125	*O. rufipogon*	India	21.00	85.10	*Or-III*	NB-like
W0126	*O. rufipogon*	India	21.00	85.10	*Or-III*	NB-like
W0130	*O. rufipogon*	India	21.00	85.10	*Or-I*	NB-like
W0133	*O. rufipogon*	India	17.05	82.18	*Or-III*	NB-like
W0134	*O. rufipogon*	India	16.93	81.88	*Or-III*	NB-like
W0136	*O. rufipogon*	India	16.91	81.82	*Or-III*	NB-like
W0137	*O. rufipogon*	India	16.91	81.82	*Or-III*	NB-like
W0138	*O. rufipogon*	India	10.51	76.65	*Or-III*	NB-like
W0141	*O. rufipogon*	India	10.37	76.37	*Or-III*	NB-like
W0144	*O. rufipogon*	Sri Lanka	7.07	80.30	*Or-I*	NB-like
W0147	*O. rufipogon*	India	20.48	85.85	*Or-I*	NB-like
W0148	*O. rufipogon*	India	20.48	85.85	*Or-I*	NB-like
W0153	*O. rufipogon*	India	22.40	88.66	*Or-III*	NB-like
W0172	*O. rufipogon*	Thailand	15.87	100.99	*Or-III*	NB-like
W0549	*O. rufipogon*	India	13.00	77.60	*Or-III*	NB-like
W0573	*O. rufipogon*	Malaya	3.10	101.50	*Or-III*	NB-like
W0574	*O. rufipogon*	Malaya	3.10	101.50	*Or-I*	NB-like
W0589	*O. rufipogon*	Malaya	5.70	102.53	*Or-I*	NB-like
W0593	*O. rufipogon*	Malaya	3.14	101.69	*Or-III*	NB-like
W0605	*O. rufipogon*	Malaya	5.80	102.39	*Or-I*	NB-like
W0630	*O. rufipogon*	Burma	20.46	94.56	*Or-I*	NB-like
W0631	*O. rufipogon*	Burma	18.82	95.22	*Or-I*	NB-like
W0632	*O. rufipogon*	Burma	18.82	95.22	*Or-I*	NB-like
W0633	*O. rufipogon*	Burma	18.82	95.22	*Or-I*	NB-like

W1082	*O. rufipogon*	India	27.00	88.40	*Or-I*	NB-like
W1083	*O. rufipogon*	India	27.00	88.40	*Or-I*	NB-like
W1084	*O. rufipogon*	India	27.00	88.40	*Or-I*	NB-like
W1105	*O. rufipogon*	India	26.82	94.17	*Or-I*	NB-like
W1107	*O. rufipogon*	India	26.82	94.17	*Or-I*	NB-like
W1111	*O. rufipogon*	India	26.82	94.17	*Or-I*	NB-like
W1112	*O. rufipogon*	India	26.82	94.17	*Or-I*	NB-like
W1119	*O. rufipogon*	India	26.82	94.17	*Or-III*	NB-like
W1121	*O. rufipogon*	India	26.82	94.17	*Or-I*	NB-like
W1142	*O. rufipogon*	India	20.46	85.93	*Or-I*	NB-like
W1143	*O. rufipogon*	India	20.46	85.93	*Or-I*	NB-like
W1161	*O. rufipogon*	Sri Lanka	6.55	80.10	*Or-III*	NB-like
W1238	*O. rufipogon*	Neth. New Guinea	-4.63	138.93	*Or-III*	NB-like
W1294	*O. rufipogon*	Philippines	7.86	124.86	*Or-III*	NB-like
W1295	*O. rufipogon*	Cambodia	12.82	102.67	*Or-I*	NB-like
W1532	*O. rufipogon*	India	20.46	85.88	*Or-I*	NB-like
W1533	*O. rufipogon*	India	20.46	85.88	*Or-I*	NB-like
W1542	*O. rufipogon*	Malaya	3.14	101.69	*Or-III*	NB-like
W1676	*O. rufipogon*	India	20.29	86.01	*Or-I*	NB-like
W1679	*O. rufipogon*	India	20.29	86.01	*Or-I*	NB-like
W1732	*O. rufipogon*	India	19.50	84.81	*Or-III*	NB-like
W1735	*O. rufipogon*	India	26.92	75.82	*Or-I*	NB-like
W1738	*O. rufipogon*	India	26.92	75.82	*Or-I*	NB-like
W1740	*O. rufipogon*	India	26.92	75.82	*Or-I*	NB-like
W1741	*O. rufipogon*	India	26.92	75.82	*Or-I*	NB-like
W1743	*O. rufipogon*	India	26.92	75.82	*Or-I*	NB-like
W1747	*O. rufipogon*	India	26.92	75.82	*Or-I*	NB-like
W1750	*O. rufipogon*	India	18.40	81.68	*Or-I*	NB-like
W1751	*O. rufipogon*	India	18.40	81.68	*Or-I*	NB-like
W1753	*O. rufipogon*	India	18.40	81.68	*Or-I*	NB-like
W1756	*O. rufipogon*	India	20.27	81.50	*Or-I*	NB-like
W1757	*O. rufipogon*	India	20.27	81.50	*Or-I*	NB-like
W1762	*O. rufipogon*	India	21.25	81.63	*Or-I*	NB-like
W1770	*O. rufipogon*	India	21.18	81.36	*Or-I*	NB-like
W1777	*O. rufipogon*	India	19.95	79.30	*Or-III*	NB-like
W1782	*O. rufipogon*	India	12.31	76.64	*Or-III*	NB-like
W1802	*O. rufipogon*	Bangladesh	23.71	90.41	*Or-I*	NB-like
W1803	*O. rufipogon*	Sri Lanka	6.93	79.95	*Or-III*	NB-like
W1819	*O. rufipogon*	Bangladesh	23.71	90.41	*Or-I*	NB-like
W1821	*O. rufipogon*	Bangladesh	23.71	90.41	*Or-I*	NB-like
W1822	*O. rufipogon*	Bangladesh	23.71	90.41	*Or-I*	NB-like
W1823	*O. rufipogon*	Bangladesh	23.71	90.41	*Or-I*	NB-like
W1832	*O. rufipogon*	Thailand	13.92	100.59	*Or-I*	NB-like
W1853	*O. rufipogon*	Thailand	19.75	99.73	*Or-I*	NB-like
W1857	*O. rufipogon*	Thailand	18.35	99.53	*Or-II*	NB-like
W1870	*O. rufipogon*	Thailand	15.23	102.50	*Or-II*	NB-like
W1890	*O. rufipogon*	Thailand	17.85	102.75	*Or-II*	NB-like
W1939	*O. rufipogon*	Thailand	8.54	99.73	*Or-II*	NB-like
W1940	*O. rufipogon*	Thailand	14.92	103.51	*Or-II*	NB-like
W1943	*O. rufipogon*	China	NA	NA	*Or-III*	NB-like
W1945	*O. rufipogon*	China	NA	NA	*Or-III*	NB-like
W1952	*O. rufipogon*	China	NA	NA	*Or-III*	NB-like
W1957	*O. rufipogon*	China	NA	NA	*Or-III*	NB-like

W1963	*O. rufipogon*	China	NA	NA	*Or-III*	NB-like
W1976	*O. rufipogon*	Indonesia	-6.40	106.82	*Or-II*	NB-like
W1978	*O. rufipogon*	Indonesia	-6.40	106.82	*Or-II*	NB-like
W1983	*O. rufipogon*	India	18.50	73.15	*Or-I*	NB-like
W1989	*O. rufipogon*	India	20.30	73.00	*Or-III*	NB-like
W1990	*O. rufipogon*	India	23.10	72.45	*Or-III*	NB-like
W1991	*O. rufipogon*	India	22.30	71.05	*Or-III*	NB-like
W1993	*O. rufipogon*	India	24.60	72.80	*Or-III*	NB-like
W1995	*O. rufipogon*	India	22.42	73.00	*Or-III*	NB-like
W1998	*O. rufipogon*	India	22.20	73.20	*Or-III*	NB-like
W2003	*O. rufipogon*	India	15.30	73.50	*Or-III*	NB-like
W2007	*O. rufipogon*	India	16.00	74.30	*Or-III*	NB-like
W2008	*O. rufipogon*	India	16.20	74.20	*Or-III*	NB-like
W2010	*O. rufipogon*	India	19.00	73.06	*Or-III*	NB-like
W2014	*O. rufipogon*	India	20.18	72.55	*Or-III*	NB-like
W2050	*O. rufipogon*	Bangladesh	23.71	90.41	*Or-II*	NB-like
W2051	*O. rufipogon*	Bangladesh	23.71	90.41	*Or-II*	NB-like
W2052	*O. rufipogon*	Bangladesh	23.71	90.41	*Or-II*	NB-like
W2064	*O. rufipogon*	Bangladesh	22.82	89.55	*Or-I*	NB-like
W2193	*O. rufipogon*	India	24.83	93.93	*Or-I*	NB-like
W2198	*O. rufipogon*	China	NA	NA	*Or-III*	NB-like
W2267	*O. rufipogon*	Laos	18.14	102.42	*Or-III*	NB-like
W2272	*O. rufipogon*	Thailand	16.21	102.48	*Or-II*	NB-like
W2322	*O. rufipogon*	Vietnam	10.45	105.32	*Or-II*	NB-like
W3000	*O. rufipogon*	China	21.38	110.25	*Or-III*	NB-like
W3004	*O. rufipogon*	China	22.25	112.79	*Or-III*	NB-like
W3005	*O. rufipogon*	China	22.25	112.79	*Or-III*	NB-like
W3006	*O. rufipogon*	China	22.38	112.69	*Or-III*	NB-like
W3008	*O. rufipogon*	China	22.53	113.04	*Or-III*	NB-like
W3010	*O. rufipogon*	China	23.17	112.89	*Or-III*	NB-like
W3011	*O. rufipogon*	China	23.17	112.89	*Or-III*	NB-like
W3013	*O. rufipogon*	China	23.12	113.26	*Or-III*	NB-like
W3014	*O. rufipogon*	China	23.29	113.83	*Or-III*	NB-like
W3015	*O. rufipogon*	China	23.29	113.83	*Or-III*	NB-like
W3016	*O. rufipogon*	China	23.05	113.75	*Or-III*	NB-like
W3018	*O. rufipogon*	China	22.80	114.46	*Or-III*	NB-like
W3022	*O. rufipogon*	China	23.72	113.02	*Or-III*	NB-like
W3023	*O. rufipogon*	China	23.72	113.02	*Or-III*	NB-like
W3027	*O. rufipogon*	China	21.95	108.61	*Or-III*	NB-like
W3028	*O. rufipogon*	China	21.95	108.61	*Or-III*	NB-like
W3029	*O. rufipogon*	China	21.80	109.19	*Or-III*	NB-like
W3030	*O. rufipogon*	China	21.80	109.19	*Or-III*	NB-like
W3031	*O. rufipogon*	China	21.77	108.36	*Or-III*	NB-like
W3032	*O. rufipogon*	China	21.77	108.36	*Or-III*	NB-like
W3034	*O. rufipogon*	China	22.28	109.97	*Or-III*	NB-like
W3036	*O. rufipogon*	China	22.63	110.14	*Or-III*	NB-like
W3038	*O. rufipogon*	China	23.07	109.36	*Or-III*	NB-like
W3039	*O. rufipogon*	China	23.39	110.07	*Or-III*	NB-like
W3041	*O. rufipogon*	China	22.75	108.49	*Or-III*	NB-like
W3043	*O. rufipogon*	China	23.17	108.28	*Or-III*	NB-like
W3044	*O. rufipogon*	China	23.17	108.28	*Or-III*	NB-like
W3048	*O. rufipogon*	China	23.90	106.61	*Or-III*	NB-like
W3050	*O. rufipogon*	China	23.90	106.61	*Or-III*	NB-like

W3053	*O. rufipogon*	China	19.10	110.35	*Or-III*	NB-like
W3054	*O. rufipogon*	China	19.10	110.35	*Or-III*	NB-like
W3055	*O. rufipogon*	China	19.10	110.35	*Or-III*	NB-like
W3056	*O. rufipogon*	China	19.50	109.50	*Or-III*	NB-like
W3064	*O. rufipogon*	China	19.25	110.46	*Or-III*	NB-like
W3065	*O. rufipogon*	China	19.25	110.46	*Or-III*	NB-like
W3066	*O. rufipogon*	China	18.75	109.17	*Or-III*	NB-like
W3073	*O. rufipogon*	China	19.62	110.70	*Or-III*	NB-like
W3076	*O. rufipogon*	China	28.23	116.61	*Or-III*	NB-like
W3077	*O. rufipogon*	China	28.23	116.61	*Or-III*	NB-like
W3078	*O. rufipogon*	China	28.23	116.61	*Or-III*	NB-like
W3079	*O. rufipogon*	China	28.23	116.61	*Or-III*	NB-like
W3080	*O. rufipogon*	China	28.23	116.61	*Or-III*	NB-like
W3081	*O. rufipogon*	China	28.23	116.61	*Or-III*	NB-like
W3082	*O. rufipogon*	China	28.23	116.61	*Or-III*	NB-like
W3092	*O. rufipogon*	China	26.80	113.55	*Or-III*	NB-like
W3094	*O. rufipogon*	China	25.28	111.34	*Or-III*	NB-like
W3095	*O. rufipogon*	China	25.28	111.34	*Or-III*	NB-like
W3096	*O. rufipogon*	China	25.28	111.34	*Or-III*	NB-like
W3097	*O. rufipogon*	China	25.28	111.34	*Or-II*	NB-like
W3098	*O. rufipogon*	China	25.28	111.34	*Or-II*	NB-like
W3105	*O. rufipogon*	India	NA	NA	*Or-I*	NB-like
W1854	*O. rufipogon*	Thailand	19.64	99.52	*Or-II*	NB-like
W0101	*O. rufipogon*	India	20.48	85.85	*Or-I*	HN-like
W0102	*O. rufipogon*	India	20.48	85.85	*Or-I*	HN-like
W0120	*O. rufipogon*	India	20.46	85.88	*Or-II*	HN-like
W0128	*O. rufipogon*	India	21.00	85.10	*Or-I*	HN-like
W0132	*O. rufipogon*	India	17.05	82.18	*Or-II*	HN-like
W0145	*O. rufipogon*	Thailand	13.72	100.48	*Or-II*	HN-like
W0149	*O. rufipogon*	India	23.48	81.10	*Or-III*	HN-like
W0151	*O. rufipogon*	India	23.48	81.10	*Or-I*	HN-like
W0157	*O. rufipogon*	India	26.59	94.19	*Or-II*	HN-like
W0168	*O. rufipogon*	Thailand	15.22	102.50	*Or-I*	HN-like
W0170	*O. rufipogon*	Thailand	15.87	100.99	*Or-I*	HN-like
W0178	*O. rufipogon*	Thailand	14.33	100.53	*Or-I*	HN-like
W0179	*O. rufipogon*	Thailand	17.42	102.78	*Or-I*	HN-like
W0576	*O. rufipogon*	Malaya	5.80	102.38	*Or-II*	HN-like
W0587	*O. rufipogon*	Malaya	5.70	102.53	*Or-II*	HN-like
W0600	*O. rufipogon*	Malaya	5.14	102.81	*Or-II*	HN-like
W0621	*O. rufipogon*	Burma	17.33	96.50	*Or-III*	HN-like
W0623	*O. rufipogon*	Burma	17.55	96.62	*Or-III*	HN-like
W0629	*O. rufipogon*	Burma	20.40	92.85	*Or-III*	HN-like
W0634	*O. rufipogon*	Burma	25.38	97.39	*Or-II*	HN-like
W1093	*O. rufipogon*	India	26.15	91.74	*Or-II*	HN-like
W1102	*O. rufipogon*	India	26.20	92.94	*Or-III*	HN-like
W1114	*O. rufipogon*	India	26.82	94.17	*Or-III*	HN-like
W1122	*O. rufipogon*	India	26.82	94.17	*Or-II*	HN-like
W1124	*O. rufipogon*	India	26.59	94.20	*Or-II*	HN-like
W1126	*O. rufipogon*	India	24.86	92.36	*Or-II*	HN-like
W1214	*O. rufipogon*	Philippines	7.86	124.86	*Or-III*	HN-like
W1230	*O. rufipogon*	Dutch New Guinea	-4.63	138.93	*Or-I*	HN-like
W1236	*O. rufipogon*	Australian New Guinea	-5.31	141.61	*Or-II*	HN-like
W1546	*O. rufipogon*	Thailand	14.50	100.89	*Or-I*	HN-like

W1547	*O. rufipogon*	Thailand	14.50	100.89	*Or-I*	HN-like
W1550	*O. rufipogon*	Thailand	18.80	98.66	*Or-II*	HN-like
W1551	*O. rufipogon*	Thailand	14.50	100.89	*Or-I*	HN-like
W1552	*O. rufipogon*	Thailand	14.33	100.52	*Or-II*	HN-like
W1555	*O. rufipogon*	Thailand	15.00	100.00	*Or-II*	HN-like
W1559	*O. rufipogon*	Thailand	15.00	100.00	*Or-I*	HN-like
W1668	*O. rufipogon*	India	18.52	82.46	*Or-III*	HN-like
W1683	*O. rufipogon*	India	20.10	84.48	*Or-II*	HN-like
W1687	*O. rufipogon*	India	23.04	88.17	*Or-II*	HN-like
W1690	*O. rufipogon*	Thailand	19.41	99.34	*Or-I*	HN-like
W1695	*O. rufipogon*	Thailand	19.45	99.44	*Or-I*	HN-like
W1700	*O. rufipogon*	Thailand	14.30	100.55	*Or-I*	HN-like
W1726	*O. rufipogon*	Thailand	15.00	100.00	*Or-I*	HN-like
W1727	*O. rufipogon*	Thailand	15.00	100.00	*Or-I*	HN-like
W1731	*O. rufipogon*	India	20.46	85.88	*Or-I*	HN-like
W1742	*O. rufipogon*	India	26.92	75.82	*Or-II*	HN-like
W1746	*O. rufipogon*	India	26.92	75.82	*Or-III*	HN-like
W1748	*O. rufipogon*	India	26.92	75.82	*Or-III*	HN-like
W1749	*O. rufipogon*	India	18.40	81.68	*Or-I*	HN-like
W1754	*O. rufipogon*	India	20.27	81.50	*Or-I*	HN-like
W1784	*O. rufipogon*	India	12.31	76.66	*Or-III*	HN-like
W1787	*O. rufipogon*	Thailand	15.00	100.00	*Or-I*	HN-like
W1790	*O. rufipogon*	Thailand	15.00	100.00	*Or-II*	HN-like
W1792	*O. rufipogon*	Thailand	15.00	100.00	*Or-I*	HN-like
W1798	*O. rufipogon*	Thailand	15.00	100.00	*Or-II*	HN-like
W1810	*O. rufipogon*	Sri Lanka	6.93	79.95	*Or-II*	HN-like
W1811	*O. rufipogon*	Sri Lanka	6.93	79.95	*Or-III*	HN-like
W1825	*O. rufipogon*	Bangladesh	23.71	90.41	*Or-I*	HN-like
W1858	*O. rufipogon*	Thailand	17.53	100.12	*Or-II*	HN-like
W1859	*O. rufipogon*	Thailand	17.52	100.12	*Or-II*	HN-like
W1862	*O. rufipogon*	Thailand	16.82	100.34	*Or-II*	HN-like
W1866	*O. rufipogon*	Thailand	14.57	100.99	*Or-I*	HN-like
W1873	*O. rufipogon*	Thailand	16.35	102.86	*Or-II*	HN-like
W1882	*O. rufipogon*	Thailand	17.03	102.91	*Or-II*	HN-like
W1891	*O. rufipogon*	Thailand	17.85	102.75	*Or-II*	HN-like
W1893	*O. rufipogon*	Thailand	17.35	102.89	*Or-I*	HN-like
W1895	*O. rufipogon*	Thailand	17.25	104.18	*Or-II*	HN-like
W1896	*O. rufipogon*	Thailand	17.25	104.18	*Or-II*	HN-like
W1912	*O. rufipogon*	Thailand	15.05	104.10	*Or-I*	HN-like
W1916	*O. rufipogon*	Thailand	14.92	103.51	*Or-II*	HN-like
W1919	*O. rufipogon*	Thailand	14.73	102.19	*Or-II*	HN-like
W1927	*O. rufipogon*	Thailand	15.46	100.13	*Or-II*	HN-like
W1971	*O. rufipogon*	Indonesia	-6.40	106.82	*Or-II*	HN-like
W1972	*O. rufipogon*	Indonesia	-6.40	106.82	*Or-II*	HN-like
W1973	*O. rufipogon*	Indonesia	-6.40	106.82	*Or-III*	HN-like
W1977	*O. rufipogon*	Indonesia	-6.40	106.82	*Or-II*	HN-like
W2005	*O. rufipogon*	India	15.35	74.20	*Or-III*	HN-like
W2017	*O. rufipogon*	Indonesia	-7.60	110.70	*Or-II*	HN-like
W2022	*O. rufipogon*	Indonesia	3.29	117.00	*Or-II*	HN-like
W2025	*O. rufipogon*	Indonesia	3.29	117.00	*Or-II*	HN-like
W2030	*O. rufipogon*	Indonesia	-3.00	105.00	*Or-II*	HN-like
W2036	*O. rufipogon*	Burma	17.33	96.50	*Or-III*	HN-like
W2055	*O. rufipogon*	Bangladesh	24.48	91.78	*Or-II*	HN-like

W2056	*O. rufipogon*	Bangladesh	24.48	91.78	*Or-II*	HN-like
W2078	*O. rufipogon*	Australia	-14.30	132.40	*Or-III*	HN-like
W2099	*O. rufipogon*	Australia	-13.07	142.07	*Or-III*	HN-like
W2108	*O. rufipogon*	Australia	-13.07	142.07	*Or-III*	HN-like
W2197	*O. rufipogon*	Indonesia	3.29	117.00	*Or-II*	HN-like
W2263	*O. rufipogon*	Cambodia	11.33	104.50	*Or-I*	HN-like
W2264	*O. rufipogon*	Vietnam	10.20	105.47	*Or-II*	HN-like
W2266	*O. rufipogon*	Laos	18.01	102.39	*Or-II*	HN-like
W2268	*O. rufipogon*	Thailand	14.35	101.00	*Or-I*	HN-like
W2275	*O. rufipogon*	Thailand	16.09	100.37	*Or-I*	HN-like
W2277	*O. rufipogon*	Thailand	15.13	100.12	*Or-I*	HN-like
W2278	*O. rufipogon*	Thailand	14.30	100.31	*Or-I*	HN-like
W2282	*O. rufipogon*	Thailand	16.49	99.47	*Or-II*	HN-like
W2284	*O. rufipogon*	Thailand	16.49	99.47	*Or-II*	HN-like
W2296	*O. rufipogon*	Cambodia	11.32	104.50	*Or-I*	HN-like
W2298	*O. rufipogon*	Laos	15.09	105.46	*Or-I*	HN-like
W2299	*O. rufipogon*	Laos	15.09	105.46	*Or-I*	HN-like
W2301	*O. rufipogon*	Laos	15.12	105.43	*Or-I*	HN-like
W2302	*O. rufipogon*	Laos	15.12	105.43	*Or-I*	HN-like
W2303	*O. rufipogon*	Laos	15.06	105.49	*Or-I*	HN-like
W2304	*O. rufipogon*	Laos	15.03	105.54	*Or-I*	HN-like
W2305	*O. rufipogon*	Laos	14.50	105.50	*Or-I*	HN-like
W2306	*O. rufipogon*	Laos	14.50	105.50	*Or-I*	HN-like
W2311	*O. rufipogon*	Laos	17.52	102.36	*Or-II*	HN-like
W2321	*O. rufipogon*	Vietnam	10.44	105.37	*Or-II*	HN-like
W2327	*O. rufipogon*	Vietnam	10.00	105.45	*Or-II*	HN-like
W2332	*O. rufipogon*	Vietnam	21.03	105.85	*Or-I*	HN-like
W3001	*O. rufipogon*	China	21.38	110.25	*Or-III*	HN-like
W3002	*O. rufipogon*	China	22.19	112.31	*Or-III*	HN-like
W3012	*O. rufipogon*	China	23.12	113.26	*Or-III*	HN-like
W3017	*O. rufipogon*	China	23.05	113.75	*Or-III*	HN-like
W3020	*O. rufipogon*	China	23.17	112.89	*Or-III*	HN-like
W3033	*O. rufipogon*	China	22.28	109.97	*Or-III*	HN-like
W3037	*O. rufipogon*	China	23.07	109.36	*Or-III*	HN-like
W3042	*O. rufipogon*	China	22.75	108.49	*Or-III*	HN-like
W3045	*O. rufipogon*	China	22.69	109.27	*Or-III*	HN-like
W3046	*O. rufipogon*	China	22.69	109.27	*Or-III*	HN-like
W3047	*O. rufipogon*	China	23.73	106.91	*Or-III*	HN-like
W3049	*O. rufipogon*	China	23.90	106.61	*Or-III*	HN-like
W3051	*O. rufipogon*	China	23.90	106.61	*Or-III*	HN-like
W3052	*O. rufipogon*	China	23.73	106.91	*Or-III*	HN-like
W3057	*O. rufipogon*	China	19.50	109.50	*Or-III*	HN-like
W3058	*O. rufipogon*	China	19.10	109.00	*Or-III*	HN-like
W3061	*O. rufipogon*	China	18.75	109.17	*Or-III*	HN-like
W3067	*O. rufipogon*	China	18.65	109.80	*Or-II*	HN-like
W3069	*O. rufipogon*	China	18.65	109.80	*Or-III*	HN-like
W3070	*O. rufipogon*	China	18.65	109.80	*Or-III*	HN-like
W3071	*O. rufipogon*	China	19.62	110.70	*Or-III*	HN-like
W3075	*O. rufipogon*	China	28.23	116.61	*Or-III*	HN-like
W1766	*O. rufipogon*	India	21.25	81.63	*Or-III*	HN-like
W2066	*O. rufipogon*	Nepal	28.60	81.60	*Or-III*	HN-like
W3035	*O. rufipogon*	China	22.63	110.14	*Or-III*	HN-like
W3040	*O. rufipogon*	China	23.39	110.07	*Or-III*	HN-like

W0135	*O. rufipogon*	India	16.93	81.88	*Or-III*	other
W0166	*O. rufipogon*	Thailand	18.81	98.66	*Or-II*	other
W0169	*O. rufipogon*	Thailand	15.87	100.99	*Or-II*	other
W0610	*O. rufipogon*	Burma	16.80	96.15	*Or-I*	other
W1244	*O. rufipogon*	Nepal	27.70	85.32	*Or-III*	other
W1534	*O. rufipogon*	India	28.64	77.23	*Or-III*	other
W1536	*O. rufipogon*	Sri Lanka	8.03	79.84	*Or-III*	other
W1557	*O. rufipogon*	Thailand	14.54	99.99	*Or-II*	other
W1558	*O. rufipogon*	Thailand	15.20	104.90	*Or-II*	other
W1560	*O. rufipogon*	Thailand	14.03	100.37	*Or-III*	other
W1681	*O. rufipogon*	India	20.09	84.45	*Or-I*	other
W1725	*O. rufipogon*	Thailand	15.00	100.00	*Or-III*	other
W1759	*O. rufipogon*	India	20.27	81.50	*Or-III*	other
W1780	*O. rufipogon*	India	17.00	81.80	*Or-II*	other
W1783	*O. rufipogon*	India	12.36	76.63	*Or-III*	other
W1804	*O. rufipogon*	Sri Lanka	6.93	79.95	*Or-II*	other
W1818	*O. rufipogon*	Bangladesh	23.71	90.41	*Or-I*	other
W1879	*O. rufipogon*	Thailand	17.03	102.91	*Or-I*	other
W1981	*O. rufipogon*	Indonesia	-2.99	104.76	*Or-II*	other
W2021	*O. rufipogon*	Indonesia	3.29	117.00	*Or-II*	other
W2024	*O. rufipogon*	Indonesia	3.29	117.00	*Or-II*	other
W2288	*O. rufipogon*	Cambodia	11.04	106.09	*Or-II*	other
W2307	*O. rufipogon*	Laos	14.52	105.52	*Or-I*	other
W3007	*O. rufipogon*	China	22.38	112.69	*Or-III*	other
W3019	*O. rufipogon*	China	22.80	114.46	*Or-III*	other
W3025	*O. rufipogon*	China	23.72	113.02	*Or-III*	other
W3059	*O. rufipogon*	China	19.10	109.00	*Or-III*	other
W3062	*O. rufipogon*	China	19.10	109.00	*Or-III*	other
W3063	*O. rufipogon*	China	19.10	109.00	*Or-III*	other
W3085	*O. rufipogon*	China	23.60	102.01	*Or-III*	other
W3086	*O. rufipogon*	China	23.60	102.01	*Or-III*	other
W3087	*O. rufipogon*	China	23.60	102.01	*Or-III*	other
W3088	*O. rufipogon*	China	23.60	102.01	*Or-III*	other
W0165	*O. rufipogon*	Thailand	18.81	98.66	*Or-II*	other
W1554	*O. rufipogon*	Thailand	15.09	99.99	*Or-II*	other
W1715	*O. rufipogon*	China	NA	NA	*Or-II*	other
W2276	*O. rufipogon*	Thailand	16.49	100.21	*Or-II*	other
W0624	*O. rufipogon*	Burma	19.77	96.11	*Or-II*	other
W1716	*O. rufipogon*	China	NA	NA	*Or-III*	other
W1849	*O. rufipogon*	Thailand	19.56	99.70	*Or-II*	other
W1865	*O. rufipogon*	Thailand	14.56	100.98	*Or-I*	other
W1925	*O. rufipogon*	Thailand	15.55	100.12	*Or-I*	other
W2012	*O. rufipogon*	India	19.80	72.55	*Or-III*	other
W3084	*O. rufipogon*	China	22.10	100.79	*Or-II*	other
W3090	*O. rufipogon*	China	22.10	100.79	*Or-II*	other

Supplementary Table 4. Distribution of the potential functional SNP T1592A of *Hwi2* in 1,529 rice accessions.

Accession ID	Genotype	Ecotype	Original producing area
W1839	T	Or-I	China
W3019	T	Or-III	China
HP119	T	indica	China
HP120	T	indica	China
HP176	T	indica	China
HP180	T	indica	China
HP227	T	indica	China
HP232	T	indica	China
HP249	T	indica	China
HP253	T	indica	China
HP456	T	indica	China
HP483	T	indica	China
HP526	T	indica	China
HP544	T	indica	China
HP565	T	indica	China
HP613	T	indica	China
HP993	T	indica	China
HP999	T	indica	China
GP11	T	indica	Philippine
GP18	T	indica	IRRI
GP24	T	indica	IRRI
GP27	T	indica	IRRI
GP68	T	indica	IRRI
GP84	T	indica	IRRI
GP143	T	indica	Philippine
GP587	T	indica	Japan
GP635	T	intermedia	North Korea
GP639	T	indica	North Korea
GP652	T	indica	North Korea
GP658	T	intermedia	Brazil
GP716	T	indica	North Korea
GP767	T	indica	North Korea
GP772	T	indica	North Korea
W0101	A	Or-I	India
W0102	A	Or-I	India
W0103	A	Or-I	India
W0106	A	Or-I	India
W0107	A	Or-I	India
W0125	A	Or-III	India
W0126	A	Or-III	India
W0132	A	Or-II	India
W0133	A	Or-III	India
W0134	A	Or-III	India
W0136	A	Or-III	India
W0137	A	Or-III	India
W0143	A	Or-II	Sri Lanka
W0144	A	Or-I	Sri Lanka
W0145	A	Or-II	Thailand
W0148	A	Or-I	India
W0149	A	Or-III	India
W0151	A	Or-I	India
W0152	A	Or-I	India
W0163	A	Or-II	Thailand
W0164	A	Or-II	Thailand

W0166	A	Or-II	Thailand
W0169	A	Or-II	Thailand
W0170	A	Or-I	Thailand
W0172	A	Or-III	Thailand
W0176	A	Or-I	Thailand
W0179	A	Or-I	Thailand
W0234	A	Or-II	Thailand
W0549	A	Or-III	India
W0587	A	Or-II	Malaya
W0589	A	Or-I	Malaya
W0590	A	Or-I	Malaya
W0593	A	Or-III	Malaya
W0606	A	Or-II	Malaya
W0610	A	Or-I	Burma
W0621	A	Or-III	Burma
W0624	A	Or-II	Burma
W0626	A	Or-I	Burma
W0638	A	Or-I	Burma
W1080	A	Or-I	India
W1083	A	Or-I	India
W1086	A	Or-I	India
W1111	A	Or-I	India
W1112	A	Or-I	India
W1117	A	Or-I	India
W1119	A	Or-III	India
W1122	A	Or-II	India
W1124	A	Or-II	India
W1142	A	Or-I	India
W1143	A	Or-I	India
W1214	A	Or-III	Philippines
W1236	A	Or-II	Australian New Guinea
W1238	A	Or-III	Neth. New Guinea
W1244	A	Or-III	Nepal
W1292	A	Or-II	Indonesia
W1546	A	Or-I	Thailand
W1547	A	Or-I	Thailand
W1550	A	Or-II	Thailand
W1551	A	Or-I	Thailand
W1553	A	Or-II	Thailand
W1556	A	Or-II	Thailand
W1557	A	Or-II	Thailand
W1558	A	Or-II	Thailand
W1560	A	Or-III	Thailand
W1675	A	Or-I	India
W1677	A	Or-I	India
W1679	A	Or-I	India
W1681	A	Or-I	India
W1695	A	Or-I	Thailand
W1698	A	Or-I	Thailand
W1700	A	Or-I	Thailand
W1718	A	Or-II	China
W1724	A	Or-III	China
W1726	A	Or-I	Thailand
W1727	A	Or-I	Thailand
W1731	A	Or-I	India
W1732	A	Or-III	India

W1735	A	Or-I	India
W1738	A	Or-I	India
W1739	A	Or-III	India
W1740	A	Or-I	India
W1742	A	Or-II	India
W1743	A	Or-I	India
W1746	A	Or-III	India
W1747	A	Or-I	India
W1748	A	Or-III	India
W1749	A	Or-I	India
W1750	A	Or-I	India
W1753	A	Or-I	India
W1754	A	Or-I	India
W1757	A	Or-I	India
W1759	A	Or-III	India
W1761	A	Or-I	India
W1766	A	Or-III	India
W1770	A	Or-I	India
W1777	A	Or-III	India
W1780	A	Or-II	India
W1782	A	Or-III	India
W1787	A	Or-I	Thailand
W1788	A	Or-I	Thailand
W1790	A	Or-II	Thailand
W1792	A	Or-I	Thailand
W1794	A	Or-I	Thailand
W1795	A	Or-I	Thailand
W1798	A	Or-II	Thailand
W1802	A	Or-I	Bangladesh
W1804	A	Or-II	Sri Lanka
W1806	A	Or-I	Sri Lanka
W1807	A	Or-III	Sri Lanka
W1809	A	Or-III	Sri Lanka
W1810	A	Or-II	Sri Lanka
W1811	A	Or-III	Sri Lanka
W1818	A	Or-I	Bangladesh
W1819	A	Or-I	Bangladesh
W1820	A	Or-I	Bangladesh
W1821	A	Or-I	Bangladesh
W1822	A	Or-I	Bangladesh
W1823	A	Or-I	Bangladesh
W1824	A	Or-I	Bangladesh
W1825	A	Or-I	Bangladesh
W1849	A	Or-II	Thailand
W1850	A	Or-II	Thailand
W1852	A	Or-I	Thailand
W1853	A	Or-I	Thailand
W1854	A	Or-II	Thailand
W1857	A	Or-II	Thailand
W1858	A	Or-II	Thailand
W1859	A	Or-II	Thailand
W1862	A	Or-II	Thailand
W1865	A	Or-I	Thailand
W1866	A	Or-I	Thailand
W1870	A	Or-II	Thailand
W1880	A	Or-II	Thailand

W1882	A	Or-II	Thailand
W1890	A	Or-II	Thailand
W1891	A	Or-II	Thailand
W1893	A	Or-I	Thailand
W1895	A	Or-II	Thailand
W1896	A	Or-II	Thailand
W1914	A	Or-I	Thailand
W1916	A	Or-II	Thailand
W1919	A	Or-II	Thailand
W1925	A	Or-I	Thailand
W1927	A	Or-II	Thailand
W1928	A	Or-I	Thailand
W1935	A	Or-I	Thailand
W1939	A	Or-II	Thailand
W1940	A	Or-II	Thailand
W1945	A	Or-III	China
W1952	A	Or-III	China
W1958	A	Or-III	China
W1959	A	Or-I	China
W1963	A	Or-III	China
W1970	A	Or-I	Indonesia
W1972	A	Or-II	Indonesia
W1973	A	Or-III	Indonesia
W1974	A	Or-II	Indonesia
W1975	A	Or-II	Indonesia
W1976	A	Or-II	Indonesia
W1977	A	Or-II	Indonesia
W1978	A	Or-II	Indonesia
W1983	A	Or-I	India
W1989	A	Or-III	India
W1990	A	Or-III	India
W1991	A	Or-III	India
W1998	A	Or-III	India
W2003	A	Or-III	India
W2005	A	Or-III	India
W2007	A	Or-III	India
W2010	A	Or-III	India
W2014	A	Or-III	India
W2021	A	Or-II	Indonesia
W2022	A	Or-II	Indonesia
W2024	A	Or-II	Indonesia
W2025	A	Or-II	Indonesia
W2030	A	Or-II	Indonesia
W2036	A	Or-III	Burma
W2050	A	Or-II	Bangladesh
W2051	A	Or-II	Bangladesh
W2052	A	Or-II	Bangladesh
W2053	A	Or-I	Bangladesh
W2055	A	Or-II	Bangladesh
W2056	A	Or-II	Bangladesh
W2060	A	Or-I	Bangladesh
W2061	A	Or-I	Bangladesh
W2063	A	Or-I	Bangladesh
W2064	A	Or-I	Bangladesh
W2066	A	Or-III	Nepal
W2197	A	Or-II	Indonesia

W2198	A	Or-III	China
W2263	A	Or-I	Cambodia
W2265	A	Or-I	Laos
W2266	A	Or-II	Laos
W2268	A	Or-I	Thailand
W2269	A	Or-I	Thailand
W2271	A	Or-I	Thailand
W2272	A	Or-II	Thailand
W2275	A	Or-I	Thailand
W2277	A	Or-I	Thailand
W2278	A	Or-I	Thailand
W2283	A	Or-II	Thailand
W2288	A	Or-II	Cambodia
W2296	A	Or-I	Cambodia
W2298	A	Or-I	Laos
W2299	A	Or-I	Laos
W2302	A	Or-I	Laos
W2304	A	Or-I	Laos
W2305	A	Or-I	Laos
W2306	A	Or-I	Laos
W2307	A	Or-I	Laos
W2311	A	Or-II	Laos
W2316	A	Or-I	Vietnam
W2318	A	Or-II	Vietnam
W2319	A	Or-I	Vietnam
W2321	A	Or-II	Vietnam
W2322	A	Or-II	Vietnam
W2331	A	Or-I	Vietnam
W2332	A	Or-I	Vietnam
W3002	A	Or-III	China
W3007	A	Or-III	China
W3009	A	Or-III	China
W3010	A	Or-III	China
W3012	A	Or-III	China
W3013	A	Or-III	China
W3014	A	Or-III	China
W3015	A	Or-III	China
W3016	A	Or-III	China
W3017	A	Or-III	China
W3018	A	Or-III	China
W3021	A	Or-III	China
W3023	A	Or-III	China
W3027	A	Or-III	China
W3030	A	Or-III	China
W3031	A	Or-III	China
W3032	A	Or-III	China
W3033	A	Or-III	China
W3034	A	Or-III	China
W3035	A	Or-III	China
W3039	A	Or-III	China
W3040	A	Or-III	China
W3044	A	Or-III	China
W3045	A	Or-III	China
W3046	A	Or-III	China
W3049	A	Or-III	China
W3050	A	Or-III	China

W3051	A	Or-III	China
W3052	A	Or-III	China
W3053	A	Or-III	China
W3054	A	Or-III	China
W3055	A	Or-III	China
W3059	A	Or-III	China
W3060	A	Or-III	China
W3062	A	Or-III	China
W3064	A	Or-III	China
W3065	A	Or-III	China
W3066	A	Or-III	China
W3068	A	Or-II	China
W3069	A	Or-III	China
W3070	A	Or-III	China
W3071	A	Or-III	China
W3073	A	Or-III	China
W3077	A	Or-III	China
W3078	A	Or-III	China
W3079	A	Or-III	China
W3080	A	Or-III	China
W3082	A	Or-III	China
W3084	A	Or-II	China
W3085	A	Or-III	China
W3089	A	Or-II	China
W3092	A	Or-III	China
W3094	A	Or-III	China
W3096	A	Or-III	China
W3105	A	Or-I	India
HP2	A	temperate japonica	China
HP6	A	temperate japonica	China
HP9	A	temperate japonica	China
HP10	A	temperate japonica	China
HP14	A	temperate japonica	China
HP15	A	temperate japonica	China
HP17	A	temperate japonica	China
HP19	A	temperate japonica	China
HP20	A	temperate japonica	China
HP22	A	temperate japonica	China
HP23	A	temperate japonica	China
HP25	A	temperate japonica	China
HP29	A	temperate japonica	China
HP31	A	temperate japonica	China
HP35	A	temperate japonica	China
HP36	A	temperate japonica	China
HP37	A	temperate japonica	China
HP39	A	temperate japonica	China
HP42	A	indica	China
HP43	A	temperate japonica	China
HP44	A	temperate japonica	China
HP45	A	temperate japonica	China
HP46	A	temperate japonica	China
HP47	A	intermedia	China
HP49	A	temperate japonica	China
HP50	A	temperate japonica	China
HP53	A	temperate japonica	China
HP55	A	temperate japonica	China

HP57	A	temperate japonica	China
HP59	A	temperate japonica	China
HP60	A	temperate japonica	China
HP68	A	temperate japonica	China
HP71	A	indica	China
HP72	A	temperate japonica	China
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HP174	A	indica	China
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HP178	A	intermedia	China
HP179	A	indica	China

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HP996	A	temperate japonica	Japan
GP1	A	intermedia	Bengal
GP34	A	aus	India
GP36	A	aus	Bengal
GP43	A	indica	India
GP44	A	intermedia	India
GP46	A	indica	India
GP55	A	tropical japonica	Ivory Coast
GP58	A	indica	India

GP62	A	aus	India
GP74	A	intermedia	IRRI
GP80	A	indica	IRRI
GP86	A	tropical japonica	US
GP118	A	indica	Indonesia
GP138	A	indica	IRRI
GP260	A	indica	India
GP284	A	aromatic	Pakistan
GP285	A	aus	Pakistan
GP294	A	aromatic	Pakistan
GP295	A	aromatic	Pakistan
GP297	A	aromatic	Pakistan
GP497	A	temperate japonica	Japan
GP502	A	temperate japonica	Japan
GP507	A	temperate japonica	Japan
GP512	A	aus	Bengal
GP513	A	tropical japonica	Philippine
GP522	A	tropical japonica	Malaysia
GP530	A	aus	India
GP532	A	tropical japonica	Brazil
GP537	A	tropical japonica	Philippine
GP542	A	aus	Philippine
GP561	A	temperate japonica	Japan
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GP574	A	indica	Philippine
GP575	A	temperate japonica	Uganda
GP584	A	temperate japonica	US
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GP620	A	temperate japonica	IRRI
GP624	A	indica	Hungary
GP625	A	aus	India
GP626	A	tropical japonica	Indonesia
GP627	A	intermedia	Indonesia
GP628	A	indica	Indonesia
GP629	A	tropical japonica	Indonesia
GP632	A	temperate japonica	Japan
GP634	A	temperate japonica	North Korea
GP646	A	temperate japonica	Thailand
GP647	A	tropical japonica	US
GP654	A	temperate japonica	Italy
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GP672	A	temperate japonica	Japan
GP674	A	temperate japonica	Japan
GP680	A	temperate japonica	Cuba
GP683	A	tropical japonica	Indonesia
GP686	A	tropical japonica	Hungary
GP688	A	tropical japonica	Indonesia
GP689	A	intermedia	Indonesia
GP693	A	intermedia	Colombia
GP694	A	temperate japonica	South Korea
GP695	A	tropical japonica	Brazil
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GP706	A	tropical japonica	Ivory Coast
GP708	A	temperate japonica	South Korea
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GP715	A	aus	Bengal
GP718	A	tropical japonica	India
GP726	A	tropical japonica	Ivory Coast
GP729	A	tropical japonica	Ivory Coast
GP747	A	temperate japonica	South Korea
GP748	A	temperate japonica	South Korea
GP755	A	temperate japonica	North Korea
GP761	A	tropical japonica	Indonesia
GP766	A	temperate japonica	North Korea
GP768	A	temperate japonica	North Korea
GP770	A	temperate japonica	North Korea
GP776	A	temperate japonica	South Korea
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GP801	A	temperate japonica	Japan
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W0605	-	Or-I	Malaya
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W1114	-	Or-III	India
W1121	-	Or-I	India
W1126	-	Or-II	India
W1161	-	Or-III	Sri Lanka
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W1295	-	Or-I	Cambodia
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W1666	-	Or-I	India
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W1690	-	Or-I	Thailand

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W1762	-	Or-I	India
W1783	-	Or-III	India
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W1832	-	Or-I	Thailand
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W1995	-	Or-III	India
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W2012	-	Or-III	India
W2017	-	Or-II	Indonesia
W2057	-	Or-III	Bangladesh
W2078	-	Or-III	Australia
W2099	-	Or-III	Australia
W2108	-	Or-III	Australia
W2193	-	Or-I	India
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W2267	-	Or-III	Laos
W2276	-	Or-II	Thailand
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W2327	-	Or-II	Vietnam
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HP191	-	indica	China
HP194	-	indica	China
HP196	-	indica	China
HP197	-	indica	China
HP200	-	indica	China
HP201	-	indica	China
HP203	-	indica	China
HP208	-	indica	China
HP209	-	indica	China
HP210	-	indica	China
HP212	-	indica	China
HP213	-	indica	China
HP215	-	indica	China
HP217	-	indica	China
HP222	-	indica	China
HP224	-	indica	China
HP225	-	indica	China
HP226	-	indica	China
HP228	-	indica	China
HP229	-	indica	China
HP230	-	indica	China
HP233	-	indica	China
HP234	-	indica	China
HP235	-	indica	China
HP236	-	indica	China
HP237	-	indica	China
HP238	-	indica	China
HP239	-	indica	China
HP240	-	indica	China
HP242	-	indica	China
HP243	-	indica	China
HP244	-	indica	China
HP245	-	indica	China
HP255	-	indica	China

HP259	-	indica	China
HP260	-	indica	China
HP261	-	indica	China
HP263	-	indica	China
HP264	-	indica	China
HP267	-	indica	China
HP268	-	indica	China
HP269	-	indica	China
HP271	-	temperate japonica	China
HP272	-	temperate japonica	China
HP279	-	indica	China
HP284	-	temperate japonica	China
HP287	-	indica	China
HP288	-	indica	China
HP289	-	indica	China
HP292	-	indica	China
HP294	-	intermedia	China
HP295	-	indica	China
HP296	-	indica	China
HP297	-	indica	China
HP299	-	indica	China
HP300	-	indica	China
HP301	-	indica	China
HP306	-	indica	China
HP308	-	temperate japonica	China
HP309	-	temperate japonica	China
HP310	-	indica	China
HP311	-	indica	China
HP312	-	indica	China
HP314	-	temperate japonica	China
HP315	-	temperate japonica	China
HP318	-	indica	China
HP319	-	indica	China
HP321	-	indica	China
HP322	-	indica	China
HP323	-	indica	China
HP326	-	indica	China
HP327	-	indica	China
HP330	-	temperate japonica	China
HP332	-	indica	China
HP333	-	indica	China
HP335	-	indica	China
HP336	-	indica	China
HP337	-	indica	China
HP339	-	indica	China
HP340	-	indica	China
HP341	-	indica	China
HP347	-	indica	China
HP349	-	indica	China
HP360	-	indica	China
HP362	-	indica	China
HP365	-	indica	China
HP368	-	indica	China
HP370	-	temperate japonica	China
HP372	-	temperate japonica	China
HP374	-	indica	China

HP376	-	temperate japonica	China
HP379	-	indica	China
HP381	-	intermedia	China
HP382	-	temperate japonica	China
HP383	-	indica	China
HP385	-	temperate japonica	China
HP387	-	indica	China
HP389	-	temperate japonica	China
HP390	-	temperate japonica	China
HP391	-	temperate japonica	China
HP395	-	indica	China
HP396	-	indica	China
HP398	-	temperate japonica	China
HP400	-	indica	China
HP401	-	temperate japonica	China
HP402	-	temperate japonica	China
HP403	-	temperate japonica	China
HP407	-	indica	China
HP408	-	indica	China
HP409	-	indica	China
HP411	-	indica	China
HP414	-	indica	China
HP415	-	indica	China
HP416	-	indica	China
HP417	-	indica	China
HP418	-	indica	China
HP420	-	indica	China
HP423	-	indica	China
HP424	-	indica	China
HP425	-	temperate japonica	China
HP426	-	temperate japonica	China
HP430	-	indica	China
HP432	-	indica	China
HP435	-	indica	China
HP437	-	indica	China
HP438	-	indica	China
HP439	-	temperate japonica	China
HP443	-	indica	China
HP445	-	indica	China
HP446	-	indica	China
HP448	-	indica	China
HP449	-	indica	China
HP450	-	indica	China
HP464	-	indica	China
HP466	-	temperate japonica	China
HP467	-	indica	China
HP471	-	indica	China
HP472	-	indica	China
HP473	-	indica	China
HP475	-	indica	China
HP477	-	indica	China
HP484	-	indica	China
HP486	-	indica	China
HP488	-	indica	China
HP489	-	indica	China
HP490	-	indica	China

HP491	-	indica	China
HP497	-	indica	China
HP499	-	indica	China
HP501	-	indica	China
HP503	-	indica	China
HP504	-	indica	China
HP511	-	temperate japonica	China
HP512	-	temperate japonica	China
HP516	-	indica	China
HP522	-	indica	China
HP523	-	indica	China
HP524	-	indica	China
HP525	-	temperate japonica	China
HP530	-	indica	China
HP532	-	temperate japonica	China
HP533	-	indica	China
HP537	-	indica	China
HP539	-	indica	China
HP540	-	indica	China
HP543	-	indica	China
HP549	-	indica	China
HP550	-	indica	China
HP551	-	indica	China
HP552	-	indica	China
HP554	-	temperate japonica	China
HP558	-	indica	China
HP559	-	indica	China
HP560	-	indica	China
HP562	-	indica	China
HP563	-	indica	China
HP564	-	temperate japonica	China
HP566	-	indica	China
HP567	-	indica	China
HP569	-	indica	China
HP570	-	indica	China
HP573	-	indica	China
HP574	-	temperate japonica	China
HP575	-	indica	China
HP576	-	indica	China
HP577	-	indica	China
HP578	-	indica	China
HP579	-	indica	China
HP580	-	indica	China
HP581	-	indica	China
HP584	-	indica	China
HP585	-	temperate japonica	China
HP592	-	indica	China
HP593	-	indica	China
HP594	-	intermedia	China
HP595	-	indica	China
HP598	-	indica	China
HP601	-	indica	China
HP602	-	temperate japonica	China
HP606	-	indica	China
HP609	-	indica	China
HP610	-	indica	China

HP611	-	indica	China
HP612	-	indica	China
HP990	-	temperate japonica	China
HP991	-	indica	China
HP992	-	temperate japonica	China
HP994	-	indica	China
HP997	-	temperate japonica	Japan
HP998	-	indica	China
GP2	-	intermedia	Bengal
GP3	-	indica	Brazil
GP4	-	indica	Philippine
GP5	-	tropical japonica	Madagascar
GP6	-	indica	Thailand
GP7	-	tropical japonica	Ivory Coast
GP8	-	aus	Bengal
GP9	-	indica	Philippine
GP10	-	indica	Philippine
GP12	-	indica	IRRI
GP13	-	indica	Philippine
GP14	-	indica	IRRI
GP15	-	indica	IRRI
GP16	-	indica	IRRI
GP17	-	indica	IRRI
GP19	-	indica	IRRI
GP20	-	indica	IRRI
GP21	-	indica	IRRI
GP22	-	indica	IRRI
GP23	-	indica	IRRI
GP25	-	indica	IRRI
GP26	-	intermedia	IRRI
GP28	-	indica	IRRI
GP29	-	indica	IRRI
GP30	-	indica	IRRI
GP31	-	indica	IRRI
GP32	-	indica	Philippine
GP33	-	indica	Philippine
GP35	-	indica	Philippine
GP37	-	indica	Philippine
GP38	-	aus	India
GP39	-	tropical japonica	Brazil
GP40	-	indica	Sri Lanka
GP41	-	indica	Vietnam
GP42	-	indica	Malaysia
GP45	-	indica	India
GP47	-	aus	India
GP48	-	indica	Cuba
GP49	-	indica	Cuba
GP50	-	indica	Cuba
GP51	-	indica	Cuba
GP52	-	indica	Cuba
GP53	-	indica	Cuba
GP54	-	indica	Cuba
GP56	-	intermedia	Uganda
GP57	-	aus	Madagascar
GP59	-	temperate japonica	Philippine
GP60	-	indica	India

GP61	-	aus	India
GP63	-	aus	India
GP64	-	indica	Burma
GP65	-	indica	IRRI
GP66	-	indica	Vietnam
GP67	-	aus	India
GP69	-	indica	IRRI
GP70	-	indica	IRRI
GP71	-	indica	IRRI
GP72	-	indica	IRRI
GP73	-	indica	IRRI
GP75	-	aus	Philippine
GP76	-	indica	Madagascar
GP77	-	tropical japonica	IRRI
GP78	-	indica	IRRI
GP79	-	indica	IRRI
GP81	-	indica	IRRI
GP82	-	indica	IRRI
GP83	-	indica	India
GP85	-	indica	Thailand
GP87	-	indica	India
GP88	-	temperate japonica	Egypt
GP89	-	aus	Bengal
GP90	-	indica	IRRI
GP91	-	indica	IRRI
GP92	-	indica	IRRI
GP93	-	indica	IRRI
GP94	-	indica	IRRI
GP95	-	indica	IRRI
GP96	-	indica	IRRI
GP97	-	indica	IRRI
GP98	-	indica	IRRI
GP99	-	indica	IRRI
GP100	-	indica	IRRI
GP101	-	indica	IRRI
GP102	-	indica	IRRI
GP103	-	indica	Sri Lanka
GP104	-	aus	Bengal
GP105	-	indica	IRRI
GP106	-	indica	IRRI
GP107	-	indica	Uganda
GP108	-	indica	Philippine
GP109	-	aus	Madagascar
GP110	-	aus	Philippine
GP111	-	indica	IRRI
GP112	-	tropical japonica	Gambian
GP113	-	indica	IRRI
GP114	-	indica	Philippine
GP115	-	indica	US
GP116	-	indica	IRRI
GP117	-	tropical japonica	US
GP119	-	indica	IRRI
GP120	-	indica	Philippine
GP121	-	indica	IRRI
GP122	-	indica	Sri Lanka
GP123	-	indica	IRRI

GP124	-	aus	Bengal
GP125	-	indica	Ivory Coast
GP126	-	temperate japonica	Uganda
GP127	-	indica	IRRI
GP128	-	indica	India
GP129	-	indica	IRRI
GP130	-	indica	IRRI
GP131	-	indica	Sri Lanka
GP132	-	indica	IRRI
GP133	-	indica	IRRI
GP134	-	indica	North Korea
GP135	-	indica	North Korea
GP136	-	indica	IRRI
GP137	-	indica	North Korea
GP139	-	indica	IRRI
GP140	-	indica	IRRI
GP141	-	intermedia	Nepal
GP142	-	indica	India
GP144	-	indica	North Korea
GP296	-	aromatic	Pakistan
GP498	-	temperate japonica	Japan
GP499	-	temperate japonica	Japan
GP500	-	temperate japonica	Japan
GP501	-	temperate japonica	Japan
GP503	-	tropical japonica	Italy
GP504	-	temperate japonica	Japan
GP505	-	temperate japonica	Japan
GP506	-	temperate japonica	Japan
GP508	-	temperate japonica	Japan
GP509	-	temperate japonica	Japan
GP510	-	temperate japonica	Portugal
GP511	-	temperate japonica	Russia
GP514	-	tropical japonica	Philippine
GP515	-	tropical japonica	Philippine
GP516	-	tropical japonica	Philippine
GP517	-	tropical japonica	Philippine
GP518	-	tropical japonica	Philippine
GP519	-	temperate japonica	Laos
GP520	-	temperate japonica	Laos
GP521	-	tropical japonica	Indonesia
GP523	-	temperate japonica	Solomon Islands
GP524	-	intermedia	Philippine
GP525	-	temperate japonica	Thailand
GP526	-	indica	Thailand
GP527	-	temperate japonica	Laos
GP528	-	temperate japonica	Laos
GP529	-	temperate japonica	Laos
GP531	-	aus	Bengal
GP533	-	aus	Bengal
GP534	-	tropical japonica	Malaysia
GP535	-	tropical japonica	Philippine
GP536	-	tropical japonica	Philippine
GP538	-	aus	India
GP539	-	aus	India
GP540	-	aus	Pakistan
GP541	-	tropical japonica	Philippine

GP543	-	intermedia	US
GP544	-	tropical japonica	US
GP545	-	temperate japonica	Egypt
GP546	-	temperate japonica	Japan
GP547	-	temperate japonica	Japan
GP548	-	temperate japonica	Japan
GP549	-	temperate japonica	Japan
GP550	-	temperate japonica	Japan
GP551	-	temperate japonica	Japan
GP552	-	temperate japonica	Japan
GP553	-	indica	Japan
GP554	-	temperate japonica	Japan
GP555	-	temperate japonica	Japan
GP556	-	temperate japonica	Japan
GP557	-	temperate japonica	Japan
GP558	-	temperate japonica	Japan
GP559	-	temperate japonica	Japan
GP560	-	temperate japonica	North Korea
GP562	-	intermedia	Albania
GP563	-	temperate japonica	Albania
GP564	-	temperate japonica	Russia
GP565	-	temperate japonica	France
GP566	-	temperate japonica	Argentina
GP567	-	temperate japonica	IRRI
GP569	-	temperate japonica	Philippine
GP570	-	temperate japonica	Philippine
GP571	-	temperate japonica	Japan
GP572	-	indica	Ivory Coast
GP573	-	indica	Brazil
GP576	-	aus	Pakistan
GP577	-	intermedia	Brazil
GP578	-	tropical japonica	Philippine
GP579	-	temperate japonica	Philippine
GP580	-	temperate japonica	Laos
GP581	-	temperate japonica	Bulgaria
GP582	-	temperate japonica	Laos
GP583	-	temperate japonica	Thailand
GP585	-	temperate japonica	North Korea
GP589	-	indica	Egypt
GP590	-	temperate japonica	India
GP592	-	temperate japonica	Japan
GP593	-	indica	North Korea
GP594	-	temperate japonica	Argentina
GP595	-	temperate japonica	Japan
GP598	-	temperate japonica	South Korea
GP601	-	temperate japonica	North Korea
GP602	-	temperate japonica	North Korea
GP606	-	temperate japonica	South Korea
GP607	-	temperate japonica	Japan
GP608	-	temperate japonica	Japan
GP609	-	temperate japonica	Japan
GP612	-	temperate japonica	US
GP613	-	intermedia	US
GP615	-	intermedia	US
GP616	-	intermedia	US
GP617	-	intermedia	US

GP619	-	temperate japonica	Japan
GP621	-	temperate japonica	Japan
GP622	-	indica	IRRI
GP623	-	temperate japonica	Japan
GP630	-	temperate japonica	Japan
GP631	-	indica	Japan
GP633	-	indica	Philippine
GP636	-	temperate japonica	North Korea
GP637	-	intermedia	North Korea
GP638	-	temperate japonica	North Korea
GP640	-	tropical japonica	US
GP641	-	tropical japonica	US
GP642	-	tropical japonica	US
GP643	-	tropical japonica	Ivory Coast
GP644	-	tropical japonica	Ivory Coast
GP645	-	intermedia	Sri Lanka
GP648	-	temperate japonica	Japan
GP649	-	temperate japonica	Japan
GP650	-	temperate japonica	Japan
GP651	-	temperate japonica	North Korea
GP653	-	temperate japonica	Japan
GP655	-	temperate japonica	Japan
GP657	-	temperate japonica	Vietnam
GP661	-	temperate japonica	Italy
GP663	-	temperate japonica	Japan
GP664	-	temperate japonica	Japan
GP665	-	temperate japonica	Japan
GP668	-	temperate japonica	Japan
GP669	-	temperate japonica	Japan
GP670	-	temperate japonica	Japan
GP673	-	temperate japonica	Japan
GP675	-	temperate japonica	Japan
GP676	-	indica	Japan
GP677	-	temperate japonica	North Korea
GP678	-	temperate japonica	South Korea
GP679	-	tropical japonica	Indonesia
GP681	-	intermedia	Cuba
GP682	-	temperate japonica	Indonesia
GP684	-	tropical japonica	Italy
GP685	-	temperate japonica	Italy
GP687	-	intermedia	Indonesia
GP690	-	tropical japonica	Indonesia
GP691	-	temperate japonica	Hungary
GP692	-	temperate japonica	Hungary
GP696	-	tropical japonica	Brazil
GP698	-	tropical japonica	Ivory Coast
GP703	-	temperate japonica	South Korea
GP707	-	temperate japonica	South Korea
GP710	-	temperate japonica	South Korea
GP711	-	tropical japonica	Indonesia
GP713	-	aus	Bengal
GP714	-	tropical japonica	Indonesia
GP717	-	temperate japonica	Brazil
GP719	-	intermedia	US
GP720	-	intermedia	Brazil
GP721	-	tropical japonica	Ivory Coast

GP722	-	indica	Ivory Coast
GP723	-	tropical japonica	Ivory Coast
GP724	-	tropical japonica	Ivory Coast
GP725	-	tropical japonica	Ivory Coast
GP727	-	tropical japonica	Ivory Coast
GP728	-	tropical japonica	Ivory Coast
GP730	-	tropical japonica	Nigeria
GP731	-	tropical japonica	Nigeria
GP732	-	tropical japonica	Nigeria
GP733	-	tropical japonica	Nigeria
GP734	-	tropical japonica	Nigeria
GP735	-	tropical japonica	Nigeria
GP736	-	intermedia	Nigeria
GP737	-	intermedia	Nigeria
GP738	-	temperate japonica	South Korea
GP739	-	temperate japonica	Hungary
GP740	-	temperate japonica	Hungary
GP741	-	temperate japonica	Japan
GP742	-	temperate japonica	South Korea
GP743	-	temperate japonica	South Korea
GP744	-	tropical japonica	Brazil
GP745	-	tropical japonica	Brazil
GP746	-	temperate japonica	South Korea
GP749	-	temperate japonica	South Korea
GP750	-	temperate japonica	Indonesia
GP751	-	tropical japonica	Brazil
GP752	-	intermedia	IRRI
GP753	-	tropical japonica	US
GP754	-	temperate japonica	North Korea
GP756	-	temperate japonica	North Korea
GP758	-	tropical japonica	US
GP759	-	temperate japonica	US
GP760	-	temperate japonica	Japan
GP762	-	intermedia	Indonesia
GP764	-	aus	India
GP765	-	temperate japonica	North Korea
GP769	-	temperate japonica	North Korea
GP771	-	temperate japonica	North Korea
GP773	-	temperate japonica	North Korea
GP774	-	temperate japonica	North Korea
GP775	-	temperate japonica	North Korea
GP777	-	temperate japonica	South Korea
GP779	-	temperate japonica	Japan
GP780	-	temperate japonica	Japan
GP782	-	temperate japonica	South Korea
GP783	-	temperate japonica	Japan
GP784	-	temperate japonica	Japan
GP785	-	indica	Japan
GP786	-	temperate japonica	Japan
GP787	-	temperate japonica	Japan
GP788	-	temperate japonica	Japan
GP789	-	temperate japonica	Japan
GP791	-	temperate japonica	Japan
GP792	-	temperate japonica	Japan
GP793	-	temperate japonica	Japan
GP794	-	temperate japonica	Japan

GP795	-	temperate japonica	Japan
GP796	-	temperate japonica	Japan
GP797	-	temperate japonica	Japan
GP798	-	temperate japonica	Japan
GP799	-	temperate japonica	Japan
GP800	-	temperate japonica	Japan
GP802	-	temperate japonica	Japan
GP803	-	temperate japonica	Japan
GP804	-	temperate japonica	Japan
GP805	-	temperate japonica	Japan
GP806	-	temperate japonica	Japan
GP807	-	temperate japonica	Japan
GP808	-	temperate japonica	Japan
GP810	-	temperate japonica	Japan
GP811	-	temperate japonica	Japan
GP812	-	temperate japonica	Japan
GP813	-	temperate japonica	Japan
GP814	-	temperate japonica	Japan
GP815	-	indica	Japan

Supplementary Table 5. Genotypes of 340 rice accessions at the *Hwi1* locus detected by PCR amplification and the *Hwi2* locus identified by genome resequencing.

Accession ID	Other Name	Species	Original producing area	Latitude	Longitude	Ecotype	*Hwi1* locus	*Hwi2* locus
GP10	IR29	*O. sativa*	Philippine	NA	NA	*indica*	9311-like	a
GP104	DV 110	*O. sativa*	Bengal	NA	NA	*aus*	9311-like	a
GP107	K 159	*O. sativa*	Uganda	NA	NA	*indica*	9311-like	a
GP109	Madagascar	*O. sativa*	Madagascar	NA	NA	*aus*	9311-like	a
GP122	RG 401-1	*O. sativa*	Sri Lanka	NA	NA	*indica*	9311-like	a
GP503	Arborio	*O. sativa*	Italy	NA	NA	*tropical japonica*	9311-like	a
GP508	BL1	*O. sativa*	Japan	NA	NA	*temperate japonica*	9311-like	a
HP178	Hongxian	*O. sativa*	China	30.16	120.10	*intermedia*	9311-like	A
HP179	Yanjing	*O. sativa*	China	27.68	120.55	*indica*	9311-like	A
W0106	-	*O. rufipogon*	India	20.46	85.88	*Or-I*	9311-like	A
W0152	-	*O. rufipogon*	India	22.90	88.25	*Or-I*	9311-like	A
W0163	-	*O. rufipogon*	Thailand	18.81	98.66	*Or-II*	9311-like	A
W0164	-	*O. rufipogon*	Thailand	18.81	98.66	*Or-II*	9311-like	A
W0176	-	*O. rufipogon*	Thailand	18.08	103.27	*Or-I*	9311-like	A
W0234	-	*O. rufipogon*	Thailand	18.08	103.27	*Or-II*	9311-like	A
W0590	-	*O. rufipogon*	Malaya	5.70	102.53	*Or-I*	9311-like	A
W0606	-	*O. rufipogon*	Malaya	6.00	102.25	*Or-II*	9311-like	A
W0626	-	*O. rufipogon*	Burma	19.77	96.11	*Or-I*	9311-like	A
W0635	-	*O. rufipogon*	Burma	19.77	96.11	*Or-II*	9311-like	a
W0638	-	*O. rufipogon*	Burma	14.08	98.20	*Or-I*	9311-like	A
W1080	-	*O. rufipogon*	India	27.00	88.40	*Or-I*	9311-like	A
W1086	-	*O. rufipogon*	India	27.00	88.40	*Or-I*	9311-like	A
W1117	-	*O. rufipogon*	India	26.82	94.17	*Or-I*	9311-like	A
W1556	-	*O. rufipogon*	Thailand	14.54	99.99	*Or-II*	9311-like	A
W1675	-	*O. rufipogon*	India	20.29	86.01	*Or-I*	9311-like	A
W1677	-	*O. rufipogon*	India	20.29	86.01	*Or-I*	9311-like	A
W1698	-	*O. rufipogon*	Thailand	14.34	100.59	*Or-I*	9311-like	A
W1718	-	*O. rufipogon*	China	NA	NA	*Or-II*	9311-like	A
W1719	-	*O. rufipogon*	China	NA	NA	*Or-I*	9311-like	a
W1724	-	*O. rufipogon*	China	NA	NA	*Or-III*	9311-like	A
W1736	-	*O. rufipogon*	India	26.92	75.82	*Or-II*	9311-like	a
W1739	-	*O. rufipogon*	India	26.92	75.82	*Or-III*	9311-like	A
W1794	-	*O. rufipogon*	Thailand	15.00	100.00	*Or-I*	9311-like	A
W1820	-	*O. rufipogon*	Bangladesh	23.71	90.41	*Or-I*	9311-like	A
W1844	-	*O. rufipogon*	China	NA	NA	*Or-III*	9311-like	a
W1850	-	*O. rufipogon*	Thailand	19.56	99.70	*Or-II*	9311-like	A
W1852	-	*O. rufipogon*	Thailand	20.28	100.09	*Or-I*	9311-like	A
W1880	-	*O. rufipogon*	Thailand	17.03	102.91	*Or-II*	9311-like	A
W1914	-	*O. rufipogon*	Thailand	14.95	103.75	*Or-I*	9311-like	A
W1928	-	*O. rufipogon*	Thailand	15.29	100.18	*Or-I*	9311-like	A
W1935	-	*O. rufipogon*	Thailand	6.89	100.53	*Or-I*	9311-like	A
W1958	-	*O. rufipogon*	China	NA	NA	*Or-III*	9311-like	A
W1975	-	*O. rufipogon*	Indonesia	-2.99	104.76	*Or-II*	9311-like	A
W2053	-	*O. rufipogon*	Bangladesh	23.71	90.41	*Or-I*	9311-like	A
W2063	-	*O. rufipogon*	Bangladesh	22.82	89.55	*Or-I*	9311-like	A
W2310	-	*O. rufipogon*	Laos	17.51	102.36	*Or-II*	9311-like	a
W2316	-	*O. rufipogon*	Vietnam	10.39	107.02	*Or-I*	9311-like	A
W2318	-	*O. rufipogon*	Vietnam	10.24	106.06	*Or-II*	9311-like	A
W2319	-	*O. rufipogon*	Vietnam	10.33	106.25	*Or-I*	9311-like	A

W2320	-	*O. rufipogon*	Vietnam	10.42	105.36	*Or-II*	9311-like	a
W2331	-	*O. rufipogon*	Vietnam	21.03	105.85	*Or-I*	9311-like	A
W3009	-	*O. rufipogon*	China	22.89	112.85	*Or-III*	9311-like	A
W3021	-	*O. rufipogon*	China	23.87	113.53	*Or-III*	9311-like	A
W3024	-	*O. rufipogon*	China	23.87	113.53	*Or-III*	9311-like	a
W3060	-	*O. rufipogon*	China	18.75	109.17	*Or-III*	9311-like	A
W3068	-	*O. rufipogon*	China	18.65	109.80	*Or-II*	9311-like	A
W3089	-	*O. rufipogon*	China	22.10	100.79	*Or-II*	9311-like	A
GP143	C 1252-9	*O. sativa*	Philippine	NA	NA	*indica*	9311-like	**T**
GP18	IR 2061-628-1-6-4-3	*O. sativa*	IRRI	NA	NA	*indica*	9311-like	**T**
GP587	Rizhongyouhao-3	*O. sativa*	Japan	NA	NA	*indica*	9311-like	**T**
GP639	Suweon 320	*O. sativa*	North Korea	NA	NA	*indica*	9311-like	**T**
GP772	Xiangnan-1	*O. sativa*	North Korea	NA	NA	*indica*	9311-like	**T**
HP180	Yizhuai	*O. sativa*	China	27.08	120.08	*indica*	9311-like	**T**
HP232	Changweizhan	*O. sativa*	China	27.22	115.14	*indica*	9311-like	**T**
HP253	Yelicang	*O. sativa*	China	33.55	109.91	*indica*	9311-like	**T**
W1839	-	*O. rufipogon*	China	NA	NA	*Or-I*	9311-like	**T**
GP718	ARC 10521	*O. sativa*	India	NA	NA	*tropical japonica*	HN-like	A
W0101	-	*O. rufipogon*	India	20.48	85.85	*Or-I*	HN-like	A
W0102	-	*O. rufipogon*	India	20.48	85.85	*Or-I*	HN-like	A
W0120	-	*O. rufipogon*	India	20.46	85.88	*Or-II*	HN-like	a
W0128	-	*O. rufipogon*	India	21.00	85.10	*Or-I*	HN-like	a
W0132	-	*O. rufipogon*	India	17.05	82.18	*Or-II*	HN-like	A
W0145	-	*O. rufipogon*	Thailand	13.72	100.48	*Or-II*	HN-like	A
W0149	-	*O. rufipogon*	India	23.48	81.10	*Or-III*	HN-like	A
W0151	-	*O. rufipogon*	India	23.48	81.10	*Or-I*	HN-like	A
W0157	-	*O. rufipogon*	India	26.59	94.19	*Or-II*	HN-like	a
W0170	-	*O. rufipogon*	Thailand	15.87	100.99	*Or-I*	HN-like	A
W0179	-	*O. rufipogon*	Thailand	17.42	102.78	*Or-I*	HN-like	A
W0576	-	*O. rufipogon*	Malaya	5.80	102.38	*Or-II*	HN-like	a
W0587	-	*O. rufipogon*	Malaya	5.70	102.53	*Or-II*	HN-like	A
W0600	-	*O. rufipogon*	Malaya	5.14	102.81	*Or-II*	HN-like	a
W0621	-	*O. rufipogon*	Burma	17.33	96.50	*Or-III*	HN-like	A
W1102	-	*O. rufipogon*	India	26.20	92.94	*Or-III*	HN-like	a
W1114	-	*O. rufipogon*	India	26.82	94.17	*Or-III*	HN-like	a
W1122	-	*O. rufipogon*	India	26.82	94.17	*Or-II*	HN-like	A
W1124	-	*O. rufipogon*	India	26.59	94.20	*Or-II*	HN-like	A
W1126	-	*O. rufipogon*	India	24.86	92.36	*Or-II*	HN-like	a
W1214	-	*O. rufipogon*	Philippines	7.86	124.86	*Or-III*	HN-like	A
W1230	-	*O. rufipogon*	Dutch New Guinea	-4.63	138.93	*Or-I*	HN-like	a
W1236	-	*O. rufipogon*	Australian New Guinea	-5.31	141.61	*Or-II*	HN-like	A
W1546	-	*O. rufipogon*	Thailand	14.50	100.89	*Or-I*	HN-like	A
W1547	-	*O. rufipogon*	Thailand	14.50	100.89	*Or-I*	HN-like	A
W1550	-	*O. rufipogon*	Thailand	18.80	98.66	*Or-II*	HN-like	A
W1551	-	*O. rufipogon*	Thailand	14.50	100.89	*Or-I*	HN-like	A
W1668	-	*O. rufipogon*	India	18.52	82.46	*Or-III*	HN-like	a
W1695	-	*O. rufipogon*	Thailand	19.45	99.44	*Or-I*	HN-like	A
W1700	-	*O. rufipogon*	Thailand	14.30	100.55	*Or-I*	HN-like	A
W1726	-	*O. rufipogon*	Thailand	15.00	100.00	*Or-I*	HN-like	A
W1727	-	*O. rufipogon*	Thailand	15.00	100.00	*Or-I*	HN-like	A
W1731	-	*O. rufipogon*	India	20.46	85.88	*Or-I*	HN-like	A
W1742	-	*O. rufipogon*	India	26.92	75.82	*Or-II*	HN-like	A
W1746	-	*O. rufipogon*	India	26.92	75.82	*Or-III*	HN-like	A

W1748	-	*O. rufipogon*	India	26.92	75.82	*Or-III*	HN-like	A
W1749	-	*O. rufipogon*	India	18.40	81.68	*Or-I*	HN-like	A
W1754	-	*O. rufipogon*	India	20.27	81.50	*Or-I*	HN-like	A
W1766	-	*O. rufipogon*	India	21.25	81.63	*Or-III*	HN-like	A
W1787	-	*O. rufipogon*	Thailand	15.00	100.00	*Or-I*	HN-like	A
W1790	-	*O. rufipogon*	Thailand	15.00	100.00	*Or-II*	HN-like	A
W1792	-	*O. rufipogon*	Thailand	15.00	100.00	*Or-I*	HN-like	A
W1798	-	*O. rufipogon*	Thailand	15.00	100.00	*Or-II*	HN-like	A
W1810	-	*O. rufipogon*	Sri Lanka	6.93	79.95	*Or-II*	HN-like	A
W1811	-	*O. rufipogon*	Sri Lanka	6.93	79.95	*Or-III*	HN-like	A
W1825	-	*O. rufipogon*	Bangladesh	23.71	90.41	*Or-I*	HN-like	A
W1858	-	*O. rufipogon*	Thailand	17.53	100.12	*Or-II*	HN-like	A
W1859	-	*O. rufipogon*	Thailand	17.52	100.12	*Or-II*	HN-like	A
W1862	-	*O. rufipogon*	Thailand	16.82	100.34	*Or-II*	HN-like	A
W1866	-	*O. rufipogon*	Thailand	14.57	100.99	*Or-I*	HN-like	A
W1882	-	*O. rufipogon*	Thailand	17.03	102.91	*Or-II*	HN-like	A
W1891	-	*O. rufipogon*	Thailand	17.85	102.75	*Or-II*	HN-like	A
W1893	-	*O. rufipogon*	Thailand	17.35	102.89	*Or-I*	HN-like	A
W1895	-	*O. rufipogon*	Thailand	17.25	104.18	*Or-II*	HN-like	A
W1896	-	*O. rufipogon*	Thailand	17.25	104.18	*Or-II*	HN-like	A
W1916	-	*O. rufipogon*	Thailand	14.92	103.51	*Or-II*	HN-like	A
W1919	-	*O. rufipogon*	Thailand	14.73	102.19	*Or-II*	HN-like	A
W1927	-	*O. rufipogon*	Thailand	15.46	100.13	*Or-II*	HN-like	A
W1972	-	*O. rufipogon*	Indonesia	-6.40	106.82	*Or-II*	HN-like	A
W1973	-	*O. rufipogon*	Indonesia	-6.40	106.82	*Or-III*	HN-like	A
W1977	-	*O. rufipogon*	Indonesia	-6.40	106.82	*Or-II*	HN-like	A
W2005	-	*O. rufipogon*	India	15.35	74.20	*Or-III*	HN-like	A
W2022	-	*O. rufipogon*	Indonesia	3.29	117.00	*Or-II*	HN-like	A
W2025	-	*O. rufipogon*	Indonesia	3.29	117.00	*Or-II*	HN-like	A
W2030	-	*O. rufipogon*	Indonesia	-3.00	105.00	*Or-II*	HN-like	A
W2036	-	*O. rufipogon*	Burma	17.33	96.50	*Or-III*	HN-like	A
W2055	-	*O. rufipogon*	Bangladesh	24.48	91.78	*Or-II*	HN-like	A
W2056	-	*O. rufipogon*	Bangladesh	24.48	91.78	*Or-II*	HN-like	A
W2066	-	*O. rufipogon*	Nepal	28.60	81.60	*Or-III*	HN-like	A
W2197	-	*O. rufipogon*	Indonesia	3.29	117.00	*Or-II*	HN-like	A
W2263	-	*O. rufipogon*	Cambodia	11.33	104.50	*Or-I*	HN-like	A
W2266	-	*O. rufipogon*	Laos	18.01	102.39	*Or-II*	HN-like	A
W2268	-	*O. rufipogon*	Thailand	14.35	101.00	*Or-I*	HN-like	A
W2275	-	*O. rufipogon*	Thailand	16.09	100.37	*Or-I*	HN-like	A
W2277	-	*O. rufipogon*	Thailand	15.13	100.12	*Or-I*	HN-like	A
W2278	-	*O. rufipogon*	Thailand	14.30	100.31	*Or-I*	HN-like	A
W2296	-	*O. rufipogon*	Cambodia	11.32	104.50	*Or-I*	HN-like	A
W2298	-	*O. rufipogon*	Laos	15.09	105.46	*Or-I*	HN-like	A
W2299	-	*O. rufipogon*	Laos	15.09	105.46	*Or-I*	HN-like	A
W2302	-	*O. rufipogon*	Laos	15.12	105.43	*Or-I*	HN-like	A
W2304	-	*O. rufipogon*	Laos	15.03	105.54	*Or-I*	HN-like	A
W2305	-	*O. rufipogon*	Laos	14.50	105.50	*Or-I*	HN-like	A
W2306	-	*O. rufipogon*	Laos	14.50	105.50	*Or-I*	HN-like	A
W2311	-	*O. rufipogon*	Laos	17.52	102.36	*Or-II*	HN-like	A
W2321	-	*O. rufipogon*	Vietnam	10.44	105.37	*Or-II*	HN-like	A
W2327	-	*O. rufipogon*	Vietnam	10.00	105.45	*Or-II*	HN-like	a
W2332	-	*O. rufipogon*	Vietnam	21.03	105.85	*Or-I*	HN-like	A
W3002	-	*O. rufipogon*	China	22.19	112.31	*Or-III*	HN-like	A
W3012	-	*O. rufipogon*	China	23.12	113.26	*Or-III*	HN-like	A
W3017	-	*O. rufipogon*	China	23.05	113.75	*Or-III*	HN-like	A

W3033	-	*O. rufipogon*	China	22.28	109.97	*Or-III*	HN-like	A
W3035	-	*O. rufipogon*	China	22.63	110.14	*Or-III*	HN-like	A
W3045	-	*O. rufipogon*	China	22.69	109.27	*Or-III*	HN-like	A
W3046	-	*O. rufipogon*	China	22.69	109.27	*Or-III*	HN-like	A
W3049	-	*O. rufipogon*	China	23.90	106.61	*Or-III*	HN-like	A
W3051	-	*O. rufipogon*	China	23.90	106.61	*Or-III*	HN-like	A
W3052	-	*O. rufipogon*	China	23.73	106.91	*Or-III*	HN-like	A
W3069	-	*O. rufipogon*	China	18.65	109.80	*Or-III*	HN-like	A
W3070	-	*O. rufipogon*	China	18.65	109.80	*Or-III*	HN-like	A
W3071	-	*O. rufipogon*	China	19.62	110.70	*Or-III*	HN-like	A
GP1	Rata 31-2 (Acc.29388)	*O. sativa*	Bengal	NA	NA	*intermedia*	NB-like	A
GP260	Basmati	*O. sativa*	India	NA	NA	*indica*	NB-like	A
GP34	Colombo	*O. sativa*	India	NA	NA	*aus*	NB-like	A
GP36	DV 86	*O. sativa*	Bengal	NA	NA	*aus*	NB-like	A
GP43	Bo Assam	*O. sativa*	India	NA	NA	*indica*	NB-like	A
GP44	Eei-eciet	*O. sativa*	India	NA	NA	*intermedia*	NB-like	A
GP515	Sipde-k	*O. sativa*	Philippine	NA	NA	*tropical japonica*	NB-like	a
GP524	Buyagaw	*O. sativa*	Philippine	NA	NA	*intermedia*	NB-like	a
GP532	Catatao	*O. sativa*	Brazil	NA	NA	*tropical japonica*	NB-like	A
GP542	BJ1	*O. sativa*	Philippine	NA	NA	*aus*	NB-like	A
GP627	Baladewa	*O. sativa*	Indonesia	NA	NA	*intermedia*	NB-like	A
GP645	Rathu Heenati	*O. sativa*	Sri Lanka	NA	NA	*intermedia*	NB-like	a
GP729	IRAT 4217	*O. sativa*	Ivory Coast	NA	NA	*tropical japonica*	NB-like	A
GP737	ITA 218	*O. sativa*	Nigeria	NA	NA	*intermedia*	NB-like	a
GP770	WEED RICE 26	*O. sativa*	North Korea	NA	NA	*temperate japonica*	NB-like	A
GP776	BEO DUL BYEO	*O. sativa*	South Korea	NA	NA	*temperate japonica*	NB-like	A
GP809	Zhongbu-M53	*O. sativa*	Japan	NA	NA	*temperate japonica*	NB-like	A
HP143	Langxihongken	*O. sativa*	China	31.14	119.17	*indica*	NB-like	A
HP198	Jiankenuo	*O. sativa*	China	27.34	117.48	*indica*	NB-like	A
HP202	Haiwu	*O. sativa*	China	23.73	117.16	*indica*	NB-like	A
HP246	Nantianzhan	*O. sativa*	China	29.54	114.04	*indica*	NB-like	A
HP390	Dongying-8	*O. sativa*	China	23.08	113.14	*temperate japonica*	NB-like	a
HP41	Xuanhuangnuo	*O. sativa*	China	26.37	110.30	*intermedia*	NB-like	a
HP547	Jiaozhan	*O. sativa*	China	23.38	110.07	*indica*	NB-like	A
HP594	Haoxiang	*O. sativa*	China	26.35	106.42	*intermedia*	NB-like	a
HP63	Zhongjiaohuang mang	*O. sativa*	China	25.51	103.79	*intermedia*	NB-like	a
HP95	Hongjian	*O. sativa*	China	42.52	129.00	*temperate japonica*	NB-like	A
HP97	Jinggou	*O. sativa*	China	34.79	116.57	*temperate japonica*	NB-like	A
HP99	Zhilishui	*O. sativa*	China	42.33	127.27	*temperate japonica*	NB-like	A
W0103	-	*O. rufipogon*	India	20.48	85.85	*Or-I*	NB-like	A
W0107	-	*O. rufipogon*	India	20.95	85.10	*Or-I*	NB-like	A
W0123	-	*O. rufipogon*	India	20.46	85.93	*Or-I*	NB-like	a
W0125	-	*O. rufipogon*	India	21.00	85.10	*Or-III*	NB-like	A
W0126	-	*O. rufipogon*	India	21.00	85.10	*Or-III*	NB-like	A
W0133	-	*O. rufipogon*	India	17.05	82.18	*Or-III*	NB-like	A
W0134	-	*O. rufipogon*	India	16.93	81.88	*Or-III*	NB-like	A
W0136	-	*O. rufipogon*	India	16.91	81.82	*Or-III*	NB-like	A
W0137	-	*O. rufipogon*	India	16.91	81.82	*Or-III*	NB-like	A
W0144	-	*O. rufipogon*	Sri Lanka	7.07	80.30	*Or-I*	NB-like	A
W0148	-	*O. rufipogon*	India	20.48	85.85	*Or-I*	NB-like	A

W0172	-	*O. rufipogon*	Thailand	15.87	100.99	*Or-III*	NB-like	A
W0549	-	*O. rufipogon*	India	13.00	77.60	*Or-III*	NB-like	A
W0589	-	*O. rufipogon*	Malaya	5.70	102.53	*Or-I*	NB-like	A
W0593	-	*O. rufipogon*	Malaya	3.14	101.69	*Or-III*	NB-like	A
W1083	-	*O. rufipogon*	India	27.00	88.40	*Or-I*	NB-like	A
W1111	-	*O. rufipogon*	India	26.82	94.17	*Or-I*	NB-like	A
W1112	-	*O. rufipogon*	India	26.82	94.17	*Or-I*	NB-like	A
W1119	-	*O. rufipogon*	India	26.82	94.17	*Or-III*	NB-like	A
W1142	-	*O. rufipogon*	India	20.46	85.93	*Or-I*	NB-like	A
W1143	-	*O. rufipogon*	India	20.46	85.93	*Or-I*	NB-like	A
W1238	-	*O. rufipogon*	Neth. New Guinea	-4.63	138.93	*Or-III*	NB-like	A
W1542	-	*O. rufipogon*	Malaya	3.14	101.69	*Or-III*	NB-like	a
W1679	-	*O. rufipogon*	India	20.29	86.01	*Or-I*	NB-like	A
W1732	-	*O. rufipogon*	India	19.50	84.81	*Or-III*	NB-like	A
W1735	-	*O. rufipogon*	India	26.92	75.82	*Or-I*	NB-like	A
W1738	-	*O. rufipogon*	India	26.92	75.82	*Or-I*	NB-like	A
W1740	-	*O. rufipogon*	India	26.92	75.82	*Or-I*	NB-like	A
W1743	-	*O. rufipogon*	India	26.92	75.82	*Or-I*	NB-like	A
W1747	-	*O. rufipogon*	India	26.92	75.82	*Or-I*	NB-like	A
W1750	-	*O. rufipogon*	India	18.40	81.68	*Or-I*	NB-like	A
W1753	-	*O. rufipogon*	India	18.40	81.68	*Or-I*	NB-like	A
W1757	-	*O. rufipogon*	India	20.27	81.50	*Or-I*	NB-like	A
W1770	-	*O. rufipogon*	India	21.18	81.36	*Or-I*	NB-like	A
W1777	-	*O. rufipogon*	India	19.95	79.30	*Or-III*	NB-like	A
W1782	-	*O. rufipogon*	India	12.31	76.64	*Or-III*	NB-like	A
W1788	-	*O. rufipogon*	Thailand	15.00	100.00	*Or-I*	NB-like	A
W1795	-	*O. rufipogon*	Thailand	15.00	100.00	*Or-I*	NB-like	A
W1802	-	*O. rufipogon*	Bangladesh	23.71	90.41	*Or-I*	NB-like	A
W1819	-	*O. rufipogon*	Bangladesh	23.71	90.41	*Or-I*	NB-like	A
W1821	-	*O. rufipogon*	Bangladesh	23.71	90.41	*Or-I*	NB-like	A
W1822	-	*O. rufipogon*	Bangladesh	23.71	90.41	*Or-I*	NB-like	A
W1823	-	*O. rufipogon*	Bangladesh	23.71	90.41	*Or-I*	NB-like	A
W1853	-	*O. rufipogon*	Thailand	19.75	99.73	*Or-I*	NB-like	A
W1854	-	*O. rufipogon*	Thailand	19.64	99.52	*Or-II*	NB-like	A
W1857	-	*O. rufipogon*	Thailand	18.35	99.53	*Or-II*	NB-like	A
W1870	-	*O. rufipogon*	Thailand	15.23	102.50	*Or-II*	NB-like	A
W1890	-	*O. rufipogon*	Thailand	17.85	102.75	*Or-II*	NB-like	A
W1939	-	*O. rufipogon*	Thailand	8.54	99.73	*Or-II*	NB-like	A
W1940	-	*O. rufipogon*	Thailand	14.92	103.51	*Or-II*	NB-like	A
W1945	-	*O. rufipogon*	China	NA	NA	*Or-III*	NB-like	A
W1952	-	*O. rufipogon*	China	NA	NA	*Or-III*	NB-like	A
W1963	-	*O. rufipogon*	China	NA	NA	*Or-III*	NB-like	A
W1976	-	*O. rufipogon*	Indonesia	-6.40	106.82	*Or-II*	NB-like	A
W1978	-	*O. rufipogon*	Indonesia	-6.40	106.82	*Or-II*	NB-like	A
W1983	-	*O. rufipogon*	India	18.50	73.15	*Or-I*	NB-like	A
W1989	-	*O. rufipogon*	India	20.30	73.00	*Or-III*	NB-like	A
W1990	-	*O. rufipogon*	India	23.10	72.45	*Or-III*	NB-like	A
W1991	-	*O. rufipogon*	India	22.30	71.05	*Or-III*	NB-like	A
W1998	-	*O. rufipogon*	India	22.20	73.20	*Or-III*	NB-like	A
W2003	-	*O. rufipogon*	India	15.30	73.50	*Or-III*	NB-like	A
W2007	-	*O. rufipogon*	India	16.00	74.30	*Or-III*	NB-like	A
W2010	-	*O. rufipogon*	India	19.00	73.06	*Or-III*	NB-like	A
W2014	-	*O. rufipogon*	India	20.18	72.55	*Or-III*	NB-like	A
W2050	-	*O. rufipogon*	Bangladesh	23.71	90.41	*Or-II*	NB-like	A
W2051	-	*O. rufipogon*	Bangladesh	23.71	90.41	*Or-II*	NB-like	A

W2052	-	*O. rufipogon*	Bangladesh	23.71	90.41	*Or-II*	NB-like	A
W2064	-	*O. rufipogon*	Bangladesh	22.82	89.55	*Or-I*	NB-like	A
W2198	-	*O. rufipogon*	China	NA	NA	*Or-III*	NB-like	A
W2272	-	*O. rufipogon*	Thailand	16.21	102.48	*Or-II*	NB-like	A
W2322	-	*O. rufipogon*	Vietnam	10.45	105.32	*Or-II*	NB-like	A
W3010	-	*O. rufipogon*	China	23.17	112.89	*Or-III*	NB-like	A
W3013	-	*O. rufipogon*	China	23.12	113.26	*Or-III*	NB-like	A
W3014	-	*O. rufipogon*	China	23.29	113.83	*Or-III*	NB-like	A
W3015	-	*O. rufipogon*	China	23.29	113.83	*Or-III*	NB-like	A
W3016	-	*O. rufipogon*	China	23.05	113.75	*Or-III*	NB-like	A
W3018	-	*O. rufipogon*	China	22.80	114.46	*Or-III*	NB-like	A
W3023	-	*O. rufipogon*	China	23.72	113.02	*Or-III*	NB-like	A
W3027	-	*O. rufipogon*	China	21.95	108.61	*Or-III*	NB-like	A
W3030	-	*O. rufipogon*	China	21.80	109.19	*Or-III*	NB-like	A
W3031	-	*O. rufipogon*	China	21.77	108.36	*Or-III*	NB-like	A
W3032	-	*O. rufipogon*	China	21.77	108.36	*Or-III*	NB-like	A
W3034	-	*O. rufipogon*	China	22.28	109.97	*Or-III*	NB-like	A
W3039	-	*O. rufipogon*	China	23.39	110.07	*Or-III*	NB-like	A
W3044	-	*O. rufipogon*	China	23.17	108.28	*Or-III*	NB-like	A
W3050	-	*O. rufipogon*	China	23.90	106.61	*Or-III*	NB-like	A
W3053	-	*O. rufipogon*	China	19.10	110.35	*Or-III*	NB-like	A
W3054	-	*O. rufipogon*	China	19.10	110.35	*Or-III*	NB-like	A
W3055	-	*O. rufipogon*	China	19.10	110.35	*Or-III*	NB-like	A
W3064	-	*O. rufipogon*	China	19.25	110.46	*Or-III*	NB-like	A
W3065	-	*O. rufipogon*	China	19.25	110.46	*Or-III*	NB-like	A
W3073	-	*O. rufipogon*	China	19.62	110.70	*Or-III*	NB-like	A
W3077	-	*O. rufipogon*	China	28.23	116.61	*Or-III*	NB-like	A
W3078	-	*O. rufipogon*	China	28.23	116.61	*Or-III*	NB-like	A
W3079	-	*O. rufipogon*	China	28.23	116.61	*Or-III*	NB-like	A
W3080	-	*O. rufipogon*	China	28.23	116.61	*Or-III*	NB-like	A
W3082	-	*O. rufipogon*	China	28.23	116.61	*Or-III*	NB-like	A
W3092	-	*O. rufipogon*	China	26.80	113.55	*Or-III*	NB-like	A
W3094	-	*O. rufipogon*	China	25.28	111.34	*Or-III*	NB-like	A
W3096	-	*O. rufipogon*	China	25.28	111.34	*Or-III*	NB-like	A
W3105	-	*O. rufipogon*	India	NA	NA	*Or-I*	NB-like	A
GP24	IR 3941-25-1	*O. sativa*	IRRI	NA	NA	*indica*	NB-like	**T**
GP716	SUWEON326	*O. sativa*	North Korea	NA	NA	*indica*	NB-like	**T**
GP767	SUWEON259	*O. sativa*	North Korea	NA	NA	*indica*	NB-like	**T**
HP176	Shanlinwan	*O. sativa*	China	27.57	119.70	*indica*	NB-like	**T**
HP249	Guizhounuo	*O. sativa*	China	29.64	109.42	*indica*	NB-like	**T**
W0166	-	*O. rufipogon*	Thailand	18.81	98.66	*Or-II*	other	A
W0169	-	*O. rufipogon*	Thailand	15.87	100.99	*Or-II*	other	A
W0610	-	*O. rufipogon*	Burma	16.80	96.15	*Or-I*	other	A
W0624	-	*O. rufipogon*	Burma	19.77	96.11	*Or-II*	other	A
W1244	-	*O. rufipogon*	Nepal	27.70	85.32	*Or-III*	other	A
W1534	-	*O. rufipogon*	India	28.64	77.23	*Or-III*	other	a
W1536	-	*O. rufipogon*	Sri Lanka	8.03	79.84	*Or-III*	other	a
W1557	-	*O. rufipogon*	Thailand	14.54	99.99	*Or-II*	other	A
W1558	-	*O. rufipogon*	Thailand	15.20	104.90	*Or-II*	other	A
W1560	-	*O. rufipogon*	Thailand	14.03	100.37	*Or-III*	other	A
W1681	-	*O. rufipogon*	India	20.09	84.45	*Or-I*	other	A
W1715	-	*O. rufipogon*	China	NA	NA	*Or-II*	other	a
W1759	-	*O. rufipogon*	India	20.27	81.50	*Or-III*	other	A
W1780	-	*O. rufipogon*	India	17.00	81.80	*Or-II*	other	A
W1804	-	*O. rufipogon*	Sri Lanka	6.93	79.95	*Or-II*	other	A

W1818	-	*O. rufipogon*	Bangladesh	23.71	90.41	*Or-I*	other	A
W1849	-	*O. rufipogon*	Thailand	19.56	99.70	*Or-II*	other	A
W1865	-	*O. rufipogon*	Thailand	14.56	100.98	*Or-I*	other	A
W1925	-	*O. rufipogon*	Thailand	15.55	100.12	*Or-I*	other	A
W1981	-	*O. rufipogon*	Indonesia	-2.99	104.76	*Or-II*	other	a
W2021	-	*O. rufipogon*	Indonesia	3.29	117.00	*Or-II*	other	A
W2024	-	*O. rufipogon*	Indonesia	3.29	117.00	*Or-II*	other	A
W2276	-	*O. rufipogon*	Thailand	16.49	100.21	*Or-II*	other	a
W2288	-	*O. rufipogon*	Cambodia	11.04	106.09	*Or-II*	other	A
W2307	-	*O. rufipogon*	Laos	14.52	105.52	*Or-I*	other	A
W3007	-	*O. rufipogon*	China	22.38	112.69	*Or-III*	other	A
W3025	-	*O. rufipogon*	China	23.72	113.02	*Or-III*	other	a
W3040	-	*O. rufipogon*	China	23.39	110.07	*Or-III*	other	A
W3059	-	*O. rufipogon*	China	19.10	109.00	*Or-III*	other	A
W3062	-	*O. rufipogon*	China	19.10	109.00	*Or-III*	other	A
W3063	-	*O. rufipogon*	China	19.10	109.00	*Or-III*	other	a
W3066	-	*O. rufipogon*	China	18.75	109.17	*Or-III*	other	A
W3084	-	*O. rufipogon*	China	22.10	100.79	*Or-II*	other	A
W3085	-	*O. rufipogon*	China	23.60	102.01	*Or-III*	other	A
W3086	-	*O. rufipogon*	China	23.60	102.01	*Or-III*	other	a
W3087	-	*O. rufipogon*	China	23.60	102.01	*Or-III*	other	a
W3088	-	*O. rufipogon*	China	23.60	102.01	*Or-III*	other	a
W3019	-	*O. rufipogon*	China	22.80	114.46	*Or-III*	other	**T**

Supplementary Table 6. The molecular marker primers and primers for molecular analysis.

Hwi2 **fine mapping**

Marker	Faward (5'-3')	Reverse (5'-3')	restriction enzyme
xxy1	GTAATCTCGTCTGCCCTCGC	TAAACTAATCAAGAACCTGTCC	-
xxy6	AACACCAGTTTTCAGAGGCT	CCCACTTATTCATGCAAGTT	-
xxy9	CCTCTTGCCATTGCTCGG	TCCACTTGCCACTCCAAA	-
xxy10	GTCCCAGGCGAGCCTTGAC	CTTCCGCTGCTCCGTTGCT	-
xxy-caps12	CCTGAGAATGAAATCACTAATT	CTGACTTATTGCTGGAGTATTC	*Hinf* I
xxy-caps23	CAGAGAAAGAATTGCATCCACA	GCTCACAATGTAGCAACCTCAC	*Hind* III
xxy-caps25	ATCAAACCGTCGCGATAGAG	CGCCTCTTTCTTTTCTCCTTCT	*Hha* I

Real-time PCR

Gene	Faward (5'-3')	Reverse (5'-3')
PBZ1	TACACCATGAAGCTTAACCCTGCC	TCGAGCACATCCGACTTTAGGACA
PR4	AGTATGGATGGACCGCCTTCTGT	CTCGCAATTATTGTCGCACCTGTTC
PR1a	GGTTATCCTGCTGCTTGCTGGT	GTTGTGCGGGTCCACGAAGT
PR1b	GGCAACTTCGTCGGACAGA	CCGTGGACCTGTTTACATTTTCA
JIOsPR10	CCGGACGCTTACAACTAAATCG	CACTTCTCAATCACTGCTTGGAA
25L1	GAACTGATTCCAGGACATCTTTCGG	TTGAAACTTGACCACCCATGGCAC
25L2	ATTGCTCCAGAATGCTCAGAGGGT	CATGTCATCAGTTGGCCTTCTTCG
290	AACATGGCTTCTCAGGCTTTGCAG	TGGTTGGTAGTTCAGTCCGAGGAA

Complementation test

Fragment	Faward (5'-3')	Reverse (5'-3')
290C1	ACATGCATGCTCCTTCCGTTGTTAATTGTTAC	GGACGCTGACTCCATCTACC
290C2	GAACTACCAACCACCCAATAAAC	GGGGCCAAACATGGCGACGATACGAT

Subcellular localization

Gene	Faward (5'-3')	Reverse (5'-3')
25L1	GGACTAGTAAACGAAAGTTATCTGTACT	CCGCTCGAGTCATCTAAGATATGACTCCCTG
25L2	GGACTAGTAATAAAAGTAAACACAAGCT	ACGCGTCGACTTAGTTTTCTCTAAGATATGCA
290	GGACTAGTATGATTCTGCACTCTCCATTTC	ACGCGTCGACTGCAACATCCGCATAGAAA

Hwi1 **variation detecting**

Marker	Faward (5'-3')	Reverse (5'-3')
Hwi1-1	GGCGTCTTGAACTGGTAG	GCTGTGGTGTAGGTATGC
Hwi1-2	GCTACTCAGATCACTGCTAC	ACGAGGTGGATTCTTGGA
Hwi1-3	CCAGAGGCAATCCTGAACAT	CACTGAGATTATTGAATGCGAAC