

Supplementary Material

Supplementary Figure S1| Haplotype analyses of *LOC_Os10g41260* (A) and *LOC_Os12g41680* (B) on *indica* (ind), *temperate japonica* (Tej), *tropical japonica* (Trj), and *O. rufipogon* (Or). Num, number.

A

LOC_Os10g41260	Physical position(bp)																		
Hap	22105798	22105348	22105384	22105464	22105555	22105567	22105798	22105873	22106230	22106748	22106817	22106947	22106948	22107127	Num.	Ind	Trj	Tej	Or
Hap.1	C	C	C	G	G	T	C	T	G	G	C	T	C	T	187	24	34	129	0
Hap.2	T	T	T	A	A	C	T	C	A	A	A	C	T	G	77	74	0	0	3

B

LOC_Os12g41680	Physical position(bp)														
Hap	25765362	25766089	25766508	25770516	25770558	Num.	Ind	Trj	Tej	Or					
Hap.1	G	A	A	C	G	186	8	39	139	0					
Hap.2	A	T	G	T	A	129	125	0	1	3					
Hap.3	A	A	G	C	G	19	19	0	0	35					

Supplementary Table S1| Summary of 191 rice natural varieties, SES, subpopulations and origin.

Num.	SES	Subpopulation	Ori.
BN1	3	japonica	China
BN2	5	japonica	China
BN3	5	japonica	China
BN4	5	japonica	Japan
BN5	5	japonica	Vietnam
BN6	3	indica	Vietnam
BN7	1	indica	India
BN8	5	indica	India
BN9	5	indica	Sri lanka
BN10	5	japonica	Soviet Union
BN11	5	indica	Romania
BN12	5	japonica	Bulgaria

BN13	7	indica	Mexico
BN14	3	indica	Australia
BN15	7	indica	Thailand
BN16	7	japonica	Indonesia
BN17	5	indica	Phillipines
BN18	5	indica	Phillipines
BN19	5	indica	India
BN20	5	indica	India
BN21	5	indica	Sri lanka
BN22	3	japonica	Argentina
BN23	3	japonica	Egypt
BN24	5	indica	Ivory Coast
BN25	7	indica	Uganda
BN26	5	japonica	Japan
BN27	5	japonica	Japan
BN28	7	japonica	Japan
BN29	7	japonica	Japan
BN30	3	indica	Indonesia
BN31	5	indica	Egypt
BN32	5	indica	Madagascar
BN33	3	japonica	Australia
BN34	3	japonica	Australia
BN35	3	japonica	Australia
BN36	5	indica	China
BN37	5	indica	China
BN38	3	indica	China
BN39	7	indica	China
BN40	5	indica	China
BN41	5	indica	China
BN42	5	indica	China
BN43	5	indica	China
BN44	7	japonica	China
BN45	5	japonica	China
BN46	5	japonica	China
BN47	9	indica	China
BN48	5	indica	China
BN49	3	indica	China
BN50	5	indica	China
BN51	7	indica	China
BN52	5	indica	China
BN53	3	indica	China
BN54	7	japonica	China
BN55	3	japonica	China
BN56	3	indica	China

BN57	3	intermediate type	China
BN58	3	indica	China
BN59	3	indica	China
BN60	1	indica	China
BN61	3	indica	China
BN62	1	indica	China
BN63	5	indica	China
BN64	3	indica	China
BN65	3	indica	China
BN66	3	indica	China
BN67	3	japonica	China
BN68	3	japonica	China
BN69	3	indica	India
BN70	3	indica	China
BN71	3	indica	China
BN72	5	indica	China
BN73	3	indica	China
BN74	5	intermediate type	China
BN75	1	japonica	China
BN76	1	indica	China
BN77	5	indica	China
BN78	5	indica	China
BN79	5	indica	China
BN80	5	indica	China
BN81	3	indica	China
BN82	3	indica	China
BN83	5	indica	China
BN84	5	indica	China
BN85	7	indica	China
BN86	5	indica	China
BN87	1	indica	China
BN88	9	indica	China
BN89	9	indica	China
BN90	7	indica	China
BN91	7	indica	China
BN92	5	japonica	China
BN93	5	indica	China
BN94	5	japonica	China
BN95	3	indica	Phillipines
BN96	3	indica	China
BN97	7	indica	China
BN98	7	japonica	China
BN99	5	indica	China
BN100	5	indica	China

BN101	3	indica	China
BN102	3	japonica	China
BN103	7	indica	China
BN104	7	indica	China
BN105	5	indica	China
BN106	1	japonica	China
BN107	5	indica	China
BN108	1	japonica	China
BN109	3	indica	China
BN110	5	indica	China
BN111	3	indica	China
BN112	5	japonica	China
BN113	7	japonica	China
BN114	3	indica	China
BN115	1	japonica	North Korea
BN116	1	japonica	Japan
BN117	1	japonica	Japan
BN118	7	japonica	Russia
BN119	1	japonica	Italy
BN120	7	indica	Indonesia
BN121	3	indica	Bangladesh
BN122	3	japonica	France
BN123	5	indica	Columbia
BN124	3	japonica	Japan
BN125	5	japonica	Japan
BN126	3	indica	Vietnam
BN127	1	indica	Laos
BN128	3	indica	India
BN129	5	intermediate type	Nigeria
BN130	7	intermediate type	United States
BN131	1	indica	Cuba
BN132	5	indica	India
BN133	5	japonica	China
BN134	5	indica	China
BN135	3	japonica	China
BN136	5	indica	China
BN137	5	indica	China
BN138	7	japonica	China
BN139	5	japonica	China
BN140	7	indica	China
BN141	5	indica	China
BN142	3	indica	China
BN143	5	indica	China
BN144	5	indica	China

BN145	5	indica	China
BN146	5	indica	China
BN147	1	indica	Phillipines
BN148	3	indica	China
BN149	5	japonica	China
BN150	5	indica	China
BN151	5	japonica	China
BN152	5	indica	China
BN153	9	japonica	China
BN154	9	indica	China
BN155	7	indica	China
BN156	5	indica	China
BN157	5	indica	China
BN158	5	indica	China
BN159	7	japonica	China
BN160	9	indica	China
BN161	5	indica	China
BN162	7	japonica	China
BN163	5	japonica	China
BN164	7	indica	China
BN165	1	indica	China
BN166	5	indica	China
BN167	7	indica	China
BN168	7	indica	China
BN169	5	japonica	United States
BN170	5	indica	China
BN171	7	indica	China
BN172	9	indica	China
BN173	5	indica	China
BN174	9	indica	Thailand
BN175	7	indica	China
BN176	7	indica	China
BN177	5	japonica	China
BN178	7	indica	China
BN179	7	indica	Phillipines
BN180	9	intermediate type	China
BN181	3	indica	China
BN182	3	japonica	Japan
BN183	7	indica	Phillipines
BN184	5	indica	China
BN185	9	japonica	China
BN186	1	indica	Phillipines
BN187	7	japonica	Japan
BN188	3	japonica	China

BN189	5	indica	Vietnam
BN190	1	indica	China
BN191	3	indica	China

Num, number; Ori, origination

Supplementary Table S2 | Salt tolerance evolution score (SES) difference of 191 accession population.

Group	Num.	SD	Mean±SE	CV
all	191	2.01	4.71±0.15	0.43
indica	129	1.98	4.74±0.17	0.42
japonica	57	2.07	4.54±0.27	0.46
intermediate type	5	2.28	5.80±1.02	0.39

SD, standard deviation; SE, standard error; CV, coefficient of variation

Supplementary Table S3 | Summary of candidate genes in all species GWAS.

Num.	Gene ID	Gene Name	Description
1	LOC_Os01g62130		ZOS1-14 - C2H2 zinc finger protein, expressed
2	LOC_Os01g62190	<i>ZFP179</i>	ZOS1-15 - C2H2 zinc finger protein, expressed
3	LOC_Os01g62200	<i>OsDSR2</i>	domain of unknown function DUF966 domain containing protein, expressed
4	LOC_Os01g62410	<i>OsMYB3R-2</i>	MYB family transcription factor putative, expressed
5	LOC_Os01g62430	<i>OsERG1</i>	C2 domain containing protein putative, expressed
6	LOC_Os01g62460		ZOS1-16 - C2H2 zinc finger protein, expressed
7	LOC_Os01g62510		WRKY119, expressed
8	LOC_Os01g62514		WRKY56, expressed
9	LOC_Os03g12940		OsFBO13 - F-box and other domain containing protein, expressed
10	LOC_Os03g13310		MYB family transcription factor putative, expressed
11	LOC_Os03g13400	<i>LPA1; OsIDD14</i>	ZOS3-06 - C2H2 zinc finger protein, expressed
12	LOC_Os03g13600		ZOS3-07 - C2H2 zinc finger protein, expressed
13	LOC_Os03g44740		cytochrome P450 putative, expressed

14	LOC_Os03g44800		DUF593 domain containing protein, expressed
15	LOC_Os03g44920		OsFBX98 - F-box domain containing protein, expressed
16	LOC_Os03g44950		LTPL91 - Protease inhibitor/seed storage/LTP family protein precursor, expressed
17	LOC_Os03g44980		OsFBX99 - F-box domain containing protein, expressed
18	LOC_Os03g45150		LTPL93 - Protease inhibitor/seed storage/LTP family protein precursor, expressed
19	LOC_Os04g51800		MYB protein putative, expressed
20	LOC_Os04g51820	<i>OsHKT1; 1</i>	High-Affinity Potassium Transporter
21	LOC_Os04g51830	<i>OsHKT1; 4</i>	OsHKT1;4 - Na ⁺ transporter, expressed
22	LOC_Os04g52090	<i>OsAP2-39</i>	AP2 domain containing protein, expressed
23	LOC_Os05g26940		CAMK_KIN1/SNF1/Nim1_like.23 - CAMK includes calcium/calmodulin depedent protein kinases, expressed
24	LOC_Os05g27550		OsFBX166 - F-box domain containing protein, expressed
25	LOC_Os06g08250		zinc finger family protein putative, expressed
26	LOC_Os06g08290	<i>AID1</i>	MYB family transcription factor putative, expressed
27	LOC_Os06g08340	<i>OsWR4; OsERF2</i>	AP2 domain containing protein, expressed
28	LOC_Os06g08570		PPR repeat domain containing protein putative, expressed
29	LOC_Os09g08920		cytochrome P450 putative, expressed
30	LOC_Os09g08990		cytochrome P450 putative, expressed
31	LOC_Os09g08620		OsFBX309 - F-box domain containing protein, expressed
32	LOC_Os12g41270		cysteine-rich receptor-like protein kinase 20 precursor putative, expressed
33	LOC_Os12g41300		OsFBX462 - F-box domain containing protein, expressed
34	LOC_Os12g41450		F-box domain containing protein, expressed
35	LOC_Os12g41490		cysteine-rich receptor-like protein kinase 8 precursor putative, expressed
36	LOC_Os12g41510		cysteine-rich receptor-like protein kinase 31 precursor putative, expressed
37	LOC_Os12g41520		cysteine-rich repeat secretory protein 26 precursor putative, expressed
38	LOC_Os12g41530		cysteine-rich receptor-like protein kinase 8 precursor putative, expressed
39	LOC_Os12g41620		WD domain G-beta repeat domain containing protein, expressed
40	LOC_Os12g41630		OsFBX463 - F-box domain containing protein, expressed
41	LOC_Os12g41680		No apical meristem protein putative, expressed
42	LOC_Os12g41700	<i>OMTN3</i>	LSD1 zinc finger domain containing protein, expressed

Supplementary Table S4 | Summary of candidate genes in indica species GWAS.

Num.	Gene ID	Gene name	Description
1	LOC_Os01g38110		cytochrome P450 putative, expressed
2	LOC_Os01g40260	<i>OsWRKY77</i>	WRKY77, expressed

3	LOC_Os01g40430	<i>OsWRKY27</i>	WRKY27, expressed
4	LOC_Os01g40530		hsp20/alpha crystallin family protein, putative, expressed
5	LOC_Os01g40540		lectin receptor-type protein kinase putative, expressed
6	LOC_Os01g40550		hsp20/alpha crystallin family protein, putative, expressed
7	LOC_Os03g12940		OsFBO13 - F-box and other domain containing protein, expressed
8	LOC_Os03g13310		MYB family transcription factor putative, expressed
9	LOC_Os03g13400	<i>LPA1; OsIDD14</i>	ZOS3-06 - C2H2 zinc finger protein, expressed
10	LOC_Os03g13600		ZOS3-07 - C2H2 zinc finger protein, expressed
11	LOC_Os03g27280	<i>OsSAPK1</i>	CAMK_CAMK_like.19 - CAMK includes calcium/calmodulin depedent protein kinases, expressed
12	LOC_Os03g27460		heat shock protein DnaJ putative, expressed
13	LOC_Os04g51800		MYB protein putative, expressed
14	LOC_Os04g51820	<i>OsHKT1; 1</i>	High-Affinity Potassium Transporter
15	LOC_Os04g52030		zinc finger domain LSD1 subclass family protein, expressed
16	LOC_Os04g52090	<i>OsAP2-39</i>	AP2 domain containing protein, expressed
17	LOC_Os04g52120	<i>OsHAK15</i>	potassium transporter putative, expressed
18	LOC_Os04g52290		PPR repeat domain containing protein putative, expressed
19	LOC_Os05g26940		CAMK_KIN1/SNF1/Nim1_like.23 - CAMK includes calcium/calmodulin depedent protein kinases, expressed
20	LOC_Os05g27550		OsFBX166 - F-box domain containing protein, expressed
21	LOC_Os06g08250		zinc finger family protein putative, expressed
22	LOC_Os06g08290	<i>AID1</i>	MYB family transcription factor putative, expressed
23	LOC_Os06g08340	<i>OsWR4; OsERF2</i>	AP2 domain containing protein, expressed
24	LOC_Os06g08570		PPR repeat domain containing protein putative, expressed
25	LOC_Os06g08360		ethylene-responsive element-binding protein putative, expressed
26	LOC_Os07g19210		cytochrome P450 putative, expressed
27	LOC_Os09g07780		pentatricopeptide repeat protein PPR986-12 putative, expressed
28	LOC_Os09g16510		WRKY74, expressed
29	LOC_Os09g16810		OsFBX317 - F-box domain containing protein, expressed
30	LOC_Os12g27790		OsFBX443 - F-box domain containing protein, expressed
31	LOC_Os12g27810		OsFBX444 - F-box domain containing protein, expressed
32	LOC_Os12g41160		IQ calmodulin-binding motif family protein putative, expressed
33	LOC_Os12g41270		cysteine-rich receptor-like protein kinase 20 precursor putative, expressed
34	LOC_Os12g41300		OsFBX462 - F-box domain containing protein, expressed
35	LOC_Os12g41450		F-box domain containing protein, expressed
36	LOC_Os12g41490		cysteine-rich receptor-like protein kinase 8 precursor putative, expressed
37	LOC_Os12g41510		cysteine-rich receptor-like protein kinase 31 precursor putative, expressed
38	LOC_Os12g41520		cysteine-rich repeat secretory protein 26 precursor putative, expressed
39	LOC_Os12g41530		cysteine-rich receptor-like protein kinase 8 precursor putative, expressed

40	LOC_Os12g41620		WD domain G-beta repeat domain containing protein, expressed
41	LOC_Os12g41630		OsFBX463 - F-box domain containing protein, expressed
42	LOC_Os12g41680	<i>OMTN3</i>	No apical meristem protein putative, expressed

Supplementary Table S5 | Summary of candidate genes in japonica species GWAS.

Num.	Gene ID	Gene name	Description
1	LOC_Os01g09640		MYB transcription factor putative, expressed
2	LOC_Os01g09790		IQ calmodulin-binding motif domain containing protein, expressed
3	LOC_Os01g09850	<i>OsIDD2</i>	ZOS1-04 - C2H2 zinc finger protein, expressed
4	LOC_Os01g10040	<i>D2; CYP90D2</i>	cytochrome P450 putative, expressed
5	LOC_Os01g21940		WD domain G-beta repeat domain containing protein, expressed
6	LOC_Os01g36600		PPR repeat domain containing protein putative, expressed
7	LOC_Os01g36940		OsFBX13 - F-box domain containing protein, expressed
8	LOC_Os01g40430	<i>OsWRKY27</i>	WRKY27, expressed
9	LOC_Os01g48130		no apical meristem protein putative, expressed
10	LOC_Os01g48250		OsFBDUF5 - F-box and DUF domain containing protein, expressed
11	LOC_Os01g48370		OsFBT1 - F-box and tubby domain containing protein, expressed
12	LOC_Os01g48380	<i>ALS3</i>	PPR repeat domain containing protein putative, expressed
13	LOC_Os01g48446		no apical meristem protein putative, expressed
14	LOC_Os01g51690	<i>OsWRKY26</i>	WRKY26, expressed
15	LOC_Os01g51840		IQ calmodulin-binding motif family protein putative, expressed
16	LOC_Os01g52640		suppressor of phythochrome A putative, expressed
17	LOC_Os01g52790		cytochrome P450 72A1 putative, expressed
18	LOC_Os01g52800		cytochrome P450 72A1 putative, expressed
19	LOC_Os01g52970		OsFBX22 - F-box domain containing protein, expressed
20	LOC_Os01g52980		OsFBX23 - F-box domain containing protein, expressed
21	LOC_Os01g53040	<i>OsWRKY14</i>	WRKY14, expressed
22	LOC_Os01g54380		PPR repeat domain containing protein putative, expressed
23	LOC_Os01g61080	<i>OsWRKY24</i>	WRKY24, expressed
24	LOC_Os01g61590		CAMK_CAMK_like.1 - CAMK includes calcium/calmodulin depedent protein kinases, expressed
25	LOC_Os01g65370		MYB family transcription factor putative, expressed
26	LOC_Os01g67970	<i>JMJ705</i>	ZOS1-20 - C2H2 zinc finger protein, expressed
27	LOC_Os02g08140		CAMK_KIN1/SNF1/Nim1_like.14 - CAMK includes calcium/calmodulin depedent protein kinases, expressed
28	LOC_Os02g14490		MYB family transcription factor putative, expressed
29	LOC_Os02g14790		WD domain G-beta repeat domain containing protein, expressed
30	LOC_Os02g18820		WD domain G-beta repeat domain containing protein, expressed
31	LOC_Os02g19180		ZOS2-06 - C2H2 zinc finger protein, expressed
32	LOC_Os02g19200		OsFBX46 - F-box domain containing protein, expressed

33	LOC_Os02g21230		F-box domain containing protein, expressed
34	LOC_Os02g21490		WD domain G-beta repeat domain containing protein, expressed
35	LOC_Os02g21580		PPR repeat containing protein, expressed
36	LOC_Os02g21810		cytochrome P450 51 putative, expressed
37	LOC_Os02g22020	<i>NIGT1</i>	MYB family transcription factor putative, expressed
38	LOC_Os02g36030		cytochrome P450 putative, expressed
39	LOC_Os02g36070		cytochrome P450 putative, expressed
40	LOC_Os02g36110	<i>CYP76M7</i>	cytochrome P450 putative, expressed
41	LOC_Os02g36150		cytochrome P450 putative, expressed
42	LOC_Os02g36190		cytochrome P450 putative, expressed
43	LOC_Os02g36280		cytochrome P450 putative, expressed
44	LOC_Os02g36360		ZOS2-11 - C2H2 zinc finger protein, expressed
45	LOC_Os02g36880		No apical meristem protein putative, expressed
46	LOC_Os02g42850		MYB family transcription factor putative, expressed
47	LOC_Os02g42870		MYB family transcription factor putative, expressed
48	LOC_Os02g42970		NAC domain containing protein putative, expressed
49	LOC_Os02g43080		PPR repeat domain containing protein putative, expressed
50	LOC_Os02g49040		CAMK_CAMK_like_unique.1 - CAMK includes calcium/calmodulin depeident protein kinases, expressed
51	LOC_Os02g49090		WD domain G-beta repeat domain containing protein, expressed
52	LOC_Os02g49250		myb-like DNA-binding domain containing protein, expressed
53	LOC_Os02g55050		OsFBX64 - F-box domain containing protein, expressed
54	LOC_Os02g55380	<i>OsWR3</i>	AP2 domain containing protein, expressed
55	LOC_Os03g04530		cytochrome P450 putative, expressed
56	LOC_Os03g04630		cytochrome P450 protein putative, expressed
57	LOC_Os03g04640		cytochrome P450 protein putative, expressed
58	LOC_Os03g04650		cytochrome P450 protein putative, expressed
59	LOC_Os03g04660	<i>WLS5/CYP96B5</i>	cytochrome P450 86A1 putative, expressed
60	LOC_Os03g04680	<i>OsCYP96B4; OsDSSI</i>	cytochrome P450 putative, expressed
61	LOC_Os03g04900		MYB family transcription factor putative, expressed
62	LOC_Os03g06370	<i>OsNBL3</i>	PPR repeat domain containing protein putative, expressed
63	LOC_Os03g10040		OsFBX77 - F-box domain containing protein, expressed
64	LOC_Os03g10140		ZOS3-04 - C2H2 zinc finger protein, expressed
65	LOC_Os03g10420		PPR repeat containing protein, expressed
66	LOC_Os03g18480	<i>OsTDF1</i>	MYB family transcription factor putative, expressed
67	LOC_Os03g18620		PPR repeat domain containing protein putative, expressed
68	LOC_Os03g20500		OsFBX82 - F-box domain containing protein, expressed
69	LOC_Os03g20550	<i>OsWRKY55;</i> <i>OsWRKY31</i>	WRKY55, expressed
70	LOC_Os03g20900		Myb transcription factor putative, expressed
71	LOC_Os03g21030		no apical meristem protein putative, expressed
72	LOC_Os03g42630		No apical meristem protein putative, expressed
73	LOC_Os03g43060		OsFBX96 - F-box domain containing protein, expressed

74	LOC_Os03g49990	<i>SLR1; OsGAI</i>	GRAS family transcription factor domain containing protein, expressed
75	LOC_Os03g53050	<i>OsWRKY87</i>	WRKY121, expressed
76	LOC_Os03g53060		cytochrome P450 putative, expressed
77	LOC_Os03g56580		no apical meristem protein putative, expressed
78	LOC_Os03g56960		PPR repeat domain containing protein putative, expressed
79	LOC_Os03g59730		No apical meristem protein putative, expressed
80	LOC_Os03g60080	<i>SNAC1; OsNAC9</i>	NAC domain-containing protein 67 putative, expressed
81	LOC_Os03g60120		AP2 domain containing protein, expressed
82	LOC_Os03g60430	<i>OsIDS1</i>	AP2 domain containing protein, expressed
83	LOC_Os03g60540		ZOS3-20 - C2H2 zinc finger protein, expressed
84	LOC_Os03g60560	<i>ZFP182; ZOS3-21</i>	ZOS3-21 - C2H2 zinc finger protein, expressed
85	LOC_Os03g60570	<i>ZFP15</i>	ZOS3-22 - C2H2 zinc finger protein, expressed
86	LOC_Os03g60910		PPR repeat domain containing protein putative, expressed
87	LOC_Os04g33370		cytochrome P450 putative, expressed
88	LOC_Os04g33820		OsFBX132 - F-box domain containing protein, expressed
89	LOC_Os05g04210		MYB family transcription factor putative, expressed
90	LOC_Os05g04340		CGMC_GSK.6 - CGMC includes CDA MAPK GSK3 and CLKC kinases, expressed
91	LOC_Os05g04550		CAMK_KIN1/SNF1/Nim1_like.3 - CAMK includes calcium/calmodulin depeident protein kinases, expressed
92	LOC_Os05g04640	<i>OsWRKY5</i>	WRKY5, expressed
93	LOC_Os05g14130		ZOS5-05 - C2H2 zinc finger protein, expressed
94	LOC_Os05g34310	<i>OsNAC024</i>	no apical meristem protein putative, expressed
95	LOC_Os05g35010		cytochrome P450 putative, expressed
96	LOC_Os05g35170	<i>IDEF2</i>	no apical meristem protein putative, expressed
97	LOC_Os05g35410	<i>OsAKT2</i>	potassium channel AKT2/3, putative, expressed
98	LOC_Os05g35500	<i>Osmyb1</i>	MYB family transcription factor putative, expressed
99	LOC_Os05g39090		CAMK_CAMK_like.29 - CAMK includes calcium/calmodulin depedent protein kinases, expressed
100	LOC_Os05g39590		AP2 domain containing protein, expressed
101	LOC_Os05g41760	<i>MFS1</i>	AP2 domain containing protein, expressed
102	LOC_Os05g50560	<i>OsMPK9</i>	CGMC_MAPKCMGC_2.9 - CGMC includes CDA MAPK GSK3 and CLKC kinases, expressed
103	LOC_Os05g50610	<i>OsWRKY8</i>	WRKY8, expressed
104	LOC_Os05g50680		WRKY83, expressed
105	LOC_Os05g50700		WRKY111, expressed
106	LOC_Os05g50710	<i>OsLEA5</i>	late embryogenesis abundant protein putative, expressed
107	LOC_Os05g50810		CAMK_CAMK_like.5 - CAMK includes calcium/calmodulin depedent protein kinases, expressed
108	LOC_Os05g50950		pentatricopeptide repeat protein PPR986-12 putative, expressed
109	LOC_Os05g51160		Myb transcription factor putative, expressed
110	LOC_Os06g19660		WD domain G-beta repeat domain containing protein, expressed
111	LOC_Os06g19670		OsFBX196 - F-box domain containing protein, expressed

112	LOC_Os06g19980		MYB family transcription factor putative, expressed
113	LOC_Os06g20020		ZOS6-03 - C2H2 zinc finger protein, expressed
114	LOC_Os06g47400		OsFBX204 - F-box domain containing protein, expressed
115	LOC_Os06g47570		PPR repeat containing protein, expressed
116	LOC_Os06g47590		AP2 domain containing protein, expressed
117	LOC_Os06g47840		ZOS6-08 - C2H2 zinc finger protein, expressed
118	LOC_Os06g47860	<i>OsSIDP366</i>	expressed protein
119	LOC_Os07g08180		PPR repeat containing protein, expressed
120	LOC_Os07g08570		OsFBX218 - F-box domain containing protein, expressed
121	LOC_Os07g08860	<i>OsSIK2</i>	S-domain receptor-like protein kinase putative, expressed
122	LOC_Os07g09000	<i>OsPHF1</i>	WD domain G-beta repeat domain containing protein, expressed
123	LOC_Os07g09110		OsFBX219 - F-box domain containing protein, expressed
124	LOC_Os07g25370		myb-like DNA-binding domain containing protein, expressed
125	LOC_Os07g25440		WD domain G-beta repeat domain containing protein, expressed
126	LOC_Os07g25710	<i>OsPHR2</i>	myb-like DNA-binding domain containing protein, expressed
127	LOC_Os07g37400	<i>OsMsr9</i>	OsFBX257 - F-box domain containing protein, expressed
128	LOC_Os07g37920		no apical meristem protein putative, expressed
129	LOC_Os07g37970		cytochrome P450 51 putative, expressed
130	LOC_Os07g37980		cytochrome P450 51 putative, expressed
131	LOC_Os07g38030		GRAS family transcription factor domain containing protein, expressed
132	LOC_Os07g38120	<i>OsCPK20</i>	CAMK_CAMK_like.34 - CAMK includes calcium/calmodulin dependent protein kinases, expressed
133	LOC_Os07g42510		AP2 domain containing protein, expressed
134	LOC_Os07g42770		CAMK_CAMK_like.35 - CAMK includes calcium/calmodulin dependent protein kinases, expressed
135	LOC_Os07g42880		PPR repeat containing protein, expressed
136	LOC_Os07g42940	<i>OsSAPK2</i>	CAMK_CAMK_like.7 - CAMK includes calcium/calmodulin dependent protein kinases, expressed
137	LOC_Os08g04270	<i>OsFIE2</i>	WD domain G-beta repeat domain containing protein, expressed
138	LOC_Os08g04290	<i>OsFIE1; Epi-df</i>	WD domain G-beta repeat domain containing protein, expressed
139	LOC_Os08g04840		MYB family transcription factor putative, expressed
140	LOC_Os08g18150		WD domain G-beta repeat domain containing protein, expressed
141	LOC_Os08g18880		WD domain G-beta repeat domain containing protein, expressed
142	LOC_Os08g36790	<i>TRAB1; OsbZIP66</i>	bZIP transcription factor putative, expressed
143	LOC_Os08g36860	<i>OsABA8ox2</i>	cytochrome P450 putative, expressed
144	LOC_Os08g36920		AP2 domain containing protein, expressed
145	LOC_Os09g03500		ZOS9-01 - C2H2 zinc finger protein, expressed
146	LOC_Os09g10980		ZOS9-02 - C2H2 zinc finger protein, expressed
147	LOC_Os09g21260		cytochrome P450 domain containing protein, expressed
148	LOC_Os09g24560		No apical meristem protein putative, expressed
149	LOC_Os09g24800		MYB family transcription factor putative, expressed
150	LOC_Os09g24840		GASR10 - Gibberellin-regulated GASA/GAST/Snakin family protein precursor, expressed

151	LOC_Os09g26050		ZOS9-09 - C2H2 zinc finger protein, expressed
152	LOC_Os09g26100		ZOS9-10 - C2H2 zinc finger protein, expressed
153	LOC_Os09g26170		MYB family transcription factor putative, expressed
154	LOC_Os09g26200		ZOS9-11 - C2H2 zinc finger protein, expressed
155	LOC_Os09g26210		ZOS9-12 - C2H2 zinc finger protein, expressed
156	LOC_Os09g26400	<i>OsDSG1</i>	zinc finger C3HC4 type domain containing protein, expressed
157	LOC_Os09g26420	<i>OsBIERF1</i>	AP2 domain containing protein, expressed
158	LOC_Os09g26780	<i>OsJAZ8</i>	zinc-finger protein putative, expressed
159	LOC_Os09g29170		CAMK_CAMK_like.38 - CAMK includes calcium/calmodulin depedent protein kinases, expressed
160	LOC_Os09g32910		OsFBX337 - F-box domain containing protein, expressed
161	LOC_Os09g32972		MYB protein putative, expressed
162	LOC_Os09g33490		no apical meristem protein putative, expressed
163	LOC_Os09g33910		CAMK_CAMK_like.39 - CAMK includes calcium/calmodulin depedent protein kinases, expressed
164	LOC_Os09g37949	<i>OsRPK1</i>	serine/threonine-protein kinase SRPK1, putative, expressed
165	LOC_Os09g38000	<i>YL3; OsNAC109</i>	no apical meristem protein putative, expressed
166	LOC_Os09g38010		no apical meristem protein putative, expressed
167	LOC_Os09g38340		ZOS9-17 - C2H2 zinc finger protein, expressed
168	LOC_Os10g38834	<i>OsSWN4</i>	no apical meristem protein putative, expressed
169	LOC_Os10g38950	<i>OsMPK6; OsMPK4</i>	CGMC_MAPKCMGC_2_ERK.14 - CGMC includes CDA MAPK GSK3 and CLKC kinases, expressed
170	LOC_Os10g41130		AP2 domain containing protein, expressed
171	LOC_Os10g41200	<i>MYBS3</i>	MYB family transcription factor putative, expressed
172	LOC_Os10g41260		MYB family transcription factor putative, expressed
173	LOC_Os10g41330		AP2 domain containing protein, expressed
174	LOC_Os10g41400	<i>OsMSRA4.1</i>	peptide methionine sulfoxide reductase putative, expressed
175	LOC_Os10g41490	<i>OsSAPK3; REK</i>	CAMK_CAMK_like.41 - CAMK includes calcium/calmodulin depedent protein kinases, expressed
176	LOC_Os10g42760		PPR repeat domain containing protein putative, expressed
177	LOC_Os10g42850	<i>OsWRKY2</i>	WRKY2, expressed
178	LOC_Os11g03110		GRAS family transcription factor domain containing protein, expressed
179	LOC_Os11g03300	<i>OsNAC10; ONAC122</i>	NAC domain transcription factor putative, expressed
180	LOC_Os11g03310		no apical meristem protein putative, expressed
181	LOC_Os11g03370		no apical meristem protein putative, expressed
182	LOC_Os11g03440		myb-like DNA-binding domain containing protein putative, expressed
183	LOC_Os11g03540		AP2 domain containing protein, expressed
184	LOC_Os12g04480		cytochrome P450 putative, expressed
185	LOC_Os12g05440	<i>CYP94C2b</i>	cytochrome P450 putative, expressed
186	LOC_Os12g12860	<i>OSIPK</i>	CAMK_CAMK_like.46 - CAMK includes calcium/calmodulin depedent protein kinases, expressed
187	LOC_Os12g13130		ZOS12-03 - C2H2 zinc finger protein, expressed

188	LOC_Os12g21930		PPR repeat containing protein, expressed
189	LOC_Os12g38180	<i>OsHSP23.7</i>	heat shock cognate 70 kDa protein 2 putative, expressed
190	LOC_Os12g38400	<i>OsMYB91</i>	MYB family transcription factor putative, expressed
191	LOC_Os12g41630		OsFBX463 - F-box domain containing protein, expressed

Supplementary Table S6| Summary of candidate genes observed in domestication region in Asian and African rice.

Num.	Gene ID	Gene Name	Or_ind	Or_jap	Ob_Og
1	LOC_Os02g21810	-	1	1	1
2	LOC_Os05g35170	<i>IDEF2</i>	1	-	1
3	LOC_Os10g41130	-	-	1	1
4	LOC_Os10g41200	<i>MYBS3</i>	-	1	1
5	LOC_Os10g41260	-	-	1	1
6	LOC_Os10g41330	-	-	1	1
7	LOC_Os12g41680	<i>OMTN3</i>	-	1	1

1 represents the gene was observed in domestication region in Asian or African rice. Or, *O. rufipogon*; ind, *indica*; jap, *japonica*; Ob, *O. barthii*; Og, *O. glaberrima*.

Supplementary Table S7| Summary of the transcriptome data of GO classification at ST1 (93-11ST0 vs. 93-11ST100).

GO Name	GO ID	P value	Differential genes	ORs value
extracellular region	GO:0005576	3.54	27	0.073
cell wall	GO:0005618	2.29	31	0.058
external encapsulating structure	GO:0030312	2.22	31	0.057
thylakoid	GO:0009579	1.96	24	0.058
membrane	GO:0016020	1.72	153	0.041
response to abiotic stimulus	GO:0009628	11.65	124	0.071
response to stress	GO:0006950	11.17	158	0.063
response to chemical	GO:0042221	10.97	170	0.061
response to endogenous stimulus	GO:0009719	7.82	100	0.067
response to biotic stimulus	GO:0009607	4.29	63	0.064
carbohydrate metabolic process	GO:0005975	3.81	34	0.076
response to external stimulus	GO:0009605	3.57	77	0.057
response to light stimulus	GO:0009416	3.17	41	0.066
secondary metabolic process	GO:0019748	2.14	21	0.070

Supplementary Table S8| Summary of the transcriptome data of GO classification at ST2 (PA64SST0 vs. PA64SST100).

GO Name	GO ID	P value	Differential gene	ORs value
transporter activity	GO:0005215	2.80	94	0.112
carbohydrate binding	GO:0030246	1.37	11	0.149
membrane	GO:0016020	7.38	370	0.098
cell wall	GO:0005618	5.60	73	0.135
external encapsulating structure	GO:0030312	5.43	73	0.134
plasma membrane	GO:0005886	4.16	212	0.099
extracellular region	GO:0005576	3.16	47	0.127
thylakoid	GO:0009579	2.91	50	0.122
vacuole	GO:0005773	1.56	76	0.098
response to chemical	GO:0042221	14.29	334	0.120
response to abiotic stimulus	GO:0009628	9.28	215	0.123
response to endogenous stimulus	GO:0009719	7.02	180	0.120
response to stress	GO:0006950	6.52	272	0.109
response to light stimulus	GO:0009416	5.92	87	0.139
response to external stimulus	GO:0009605	5.67	159	0.118
secondary metabolic process	GO:0019748	4.64	47	0.156
response to biotic stimulus	GO:0009607	4.50	118	0.120
lipid metabolic process	GO:0006629	3.84	83	0.124
post-embryonic development	GO:0009791	3.74	149	0.110
multicellular organism development	GO:0007275	2.48	224	0.098
anatomical structure development	GO:0048856	1.99	252	0.095
cellular homeostasis	GO:0019725	1.85	25	0.133
generation of precursor metabolites and energy	GO:0006091	1.54	31	0.119
reproduction	GO:0000003	1.47	137	0.097