

# Physical mapping, expression analysis and polymorphism survey of resistance gene analogues on chromosome 11 of rice

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*J. Biosci.* 34(2), June 2009, 251–261 © Indian Academy of Sciences

## Supplementary tables

**Table 1.** List of specific primers designed for the resistance gene analogues (RGAs) predicted in the BAC/PACs of rice chromosome 11

S. no.	Primer name	RGA no.	BAC/PAC	Forward primer	Reverse primer	Tm	Expected product size (bp)
1	AC133216-1	RRGA11-179	b0049B20	CACTTCACTTGGAGCCATGC	AGTCACGTCAGAGTCAATCACG	60	428
2	AC133216-10	RRGA11-180	do	TTCTTGAAGGAGGAGGAAGG	GAGTTATGGAGCGAGCAAGC	60	397
3	AC133216-11	RRGA11-181	do	GTCCAGGGTGTACGAGATCC	GCATGAGAGGATGCAAGTAGC	64	535
4	AC133216-13	RRGA11-182	do	CGATCACTGACCATGTTTGG	CCTTCTGCAGTCGATTCTCC	60	461
5	AC133216-16	RRGA11-184	do	AGGTCGGTGACAGAGACTCG	CTCAGAGACCGCAAGAAAGC	62	653
6	AC133216-15	RRGA11-183	do	AGCATAATCTGCCGAAGAGC	CTGGTCAATCCCAACTAGGC	64	455
7	AC135643-1	RRGA11-168	a0023F01	AGTATGTGGGTGGCTGAAGG	CAAGTGTGCCAGTCAAATCC	60	412
8	AC135643-4	RRGA11-164	do	AGAAGAGCTCGCAGAGTTGC	TGCAGGCATGTATGATCTCC	60	446
9	AC135643-6	RRGA11-165	do	CAGCTAGTTGAACCAACC	TCCACACATCATCCAACACC	60	362
10	AC135643-7	RRGA11-166	do	GCCAGTTCTTACACACAAGG	GAGGTTGCAGCATAAGTGG	60	352
11	AC129227-2	RRGA11-151	b0099J16	CAGTTTCGGTGTGTGATGC	CTAGATTGGCCACGACTTCC	66	395
12	AC129224-1	RRGA11-143	a0029P13	CTGCACGGTACTTGACTTGG	CAGCTTCTCCATTTCCTTCG	60	352
13	AC129224-8	RRGA11-144	do	ACCTCACCAAGTCCAAGACG	GGAATTCGTCCCTCTTCTCC	60	351
14	AC129224-10	RRGA11-146	a0029P13	ACCAGCACTCCTCTGTCCACC	ACATAACCGGGCTATCTGG	60	370
15	AC129224-11	RRGA11-147	do	GTGGATGAACCAGGTCAAGG	CTGATCTGCCATCTCCTTCC	60	434
16	AC129224-20	RRGA11-148	do	TGGAGACATTGGACATCAGG	GGTTGATCTGGATCGACAGG	60	375
17	AC129225-3	RRGA11-140	a0051D10	GGCATTCCAAGAAGGAAGG	GAGACGCGACATGAGAAAGC	58	540
18	AC129225-4	RRGA11-141	do	AAAGCATCAGCAGGACAAGC	TCTTGAACCTGCAGTAGC	60	407
19	AC129225-11	RRGA11-142	do	CAGCCAACCTGAAGAAGAGC	GGACAATCATCTGGGAAAGC	64	406
20	AC129225-20	RRGA11-145	do	CTCGACCACCACTACCACAAC	CGTTCACAGTGTCTTCAGGTC	60	388
21	AC122143-3	RRGA11-131	a0090F16	TCCTCCTCAAAGACGACTACG	AAGATGGTTGGTTGGTAGCC	56	357
22	AC104846-2	RRGA11-128	P0004C07	CCAGTGCCTGAAAACCTTGG	GAGGAAAGATGTGCAAACC	60	438
23	AC104846-5	RRGA11-129	do	AAGCACGGAAACTAGGATGC	AAGATGGTTTTCCCTGACC	56	383
24	AC104846-10	RRGA11-130	do	TTGGTCGATAGGAAGGATGG	TCCACCGGATCAGAGTTAGC	54	409
25	AC121327-1	RRGA11-125	a0016O23	TCAAATGCAGCAGACTACGG	GCATTCATCCTGGAAGTTGG	54	434
26	AC121327-5	RRGA11-126	do	ATCCTCGCCGTCTTATCTCC	GGCACATGCATACTTTGTGG	60	355
27	AC109832-22	RRGA11-124	P0038B07	GAATGGCATCATGGTGAGC	CCTTGAGCTCCTGAATCTGC	56	395
28	AF161269-1	RRGA11-123	a0034K22	GAGAGGTGGTTATGGCATCG	TTCTGTGTCTTTGTCTGC	54	443
29	AC109644-3	RRGA11-103	P0459F09	TGACCTCAGCAACAACAACC	TTACGTGTTTGGAGGAGTGG	56	356
30	AC116367-6	RRGA11-185	a0059H21	ACATTACCATGCTGGCTTCC	CAGCGTGCTTGATAGATTGC	56	383
31	AC116367-7	RRGA11-186	do	ATTGCAAGGCTGCTGTTAGG	CGACAACATCACTCATCACC	56	500
32	AC116367-8	RRGA11-187	do	GGGCAACACAAGTTTCAACC	ACCAAGAGATGCAGGAATGG	56	450
33	AC116367-15	RRGA11-188	do	TATGGCAACCACATCTCAGG	GACTCGGGATTGTACCAACG	56	550

S. no.	Primer name	RGA no.	BAC/PAC	Forward primer	Reverse primer	Tm	Expected product size (bp)
34	AC116367-18	RRGA11-189	do	CCTCCAAGTTATTGCCATGC	TGCCGTTAGTGAGTTCATGC	56	372
35	AC116367-19	RRGA11-190	do	TGCCCTGTGACAGGTAACATCC	TCAGCTGGGTATGGGATAGG	56	396
36	AC116367-20	RRGA11-191	do	GCTGCTTCCACAAAAGTGC	GCAGCCTCCCAAGATTAGC	56	380
37	AC116367-21	RRGA11-193	do	GGGTCTTGTCTGACCTTGC	TATATCACCCGGGAGTGTCC	56	361
38	AC109644-5	RRGA11-104	P0459F09	TTCTCTCGTTGGAGTAGC	CCTGAGAGAGCTGACGAACC	60	390
39	AC109644-11	RRGA11-105	P0459F09	ATTGCTCTGCTCCTCACTGC	CGAGCTTAGGTTTCAGCATCC	60	385
40	AC109644-14	RRGA11-106	do	TCACCTGTAGCAACCTCACC	ACGTAAGGCCAATCAGATGC	60	415
41	AC109644-16	RRGA11-107	do	ACTCCGGACGATATCAATGG	ACCCAAGGATGAAGGTAGGG	60	442
42	AC109644-17	RRGA11-108	do	CAATCTCTGGCCGAGTTACC	GAATTACCCAGCGAGACAGG	60	380
43	AC109644-18	RRGA11-109	do	GATGGACCTCACCATCAACC	ACAGAGCAAGCTCCAAGAGG	60	374
44	AC109644-20	RRGA11-110	do	TTTGGGCAATCTCACTAGCC	AACCCCGAGGTGATAATTCC	60	369
45	AC109644-21	RRGA11-111	do	CACTAATGCGTTCCTGCTCC	CAGGAAGAAGCTCCTCCAAAGC	60	360
46	AC133291-1	RRGA11-096	P0452B04	ATGCAATACCCCTCATCAGC	AGCTTGAGGTTGTTTCATGC	54	408
47	AC133291-3	RRGA11-097	do	GGGGCAGTTGACTAGTTTGG	AGCCATGCAGGAAACATAGG	60	353
48	AC133291-6	RRGA11-098	do	CGTGGTCTTACTTCCATCG	GGCCATCTGAACCACTTAGG	60	365
49	AC133291-7	RRGA11-100	do	GATTGTTGCCAATGGAGAGG	AGGCCAATCGAGTACTGTGC	60	438
50	AC133291-14	RRGA11-101	do	CAAGTTACCCTGCTCTTCC	TGTTGTTGCTGAGGTCAAGG	60	359
51	AC133291-16	RRGA11-102	do	AGACTGCCAAGTTGGATTGG	TGGTCGCTAGTGATGTCTCG	60	383
52	AC136905-4	RRGA11-093	b0064E13	TGGGAGACGTCAACCTTAGC	ACCCTATGCACATTCCTTGG	60	382
53	AC136905-7	RRGA11-094	do	AATCTCCGGTAAACCTTGG	TCTTGTACGCACAAAGAGG	58	409
54	AC136956-24	RRGA11-090	A0038B22	CTCAGCTCGGTAACCTTTCG	CAAGAAGTTGGAGGGACAGC	60	429
55	AC136956-20	RRGA11-089	a0038B22	GGTGTTTTGCAGGTTTGGAGC	GATTTCGCAGATGGATTTCAGG	60	715
56	AC134624-4	RRGA11-083	a0041I05	GGATGAAGCACAACTCATCG	GGCCAACATACTCGCTATGG	58	358
57	AC134624-7	RRGA11-084	do	AGTGCATAAGACCGTCCAGG	GGCCTGGCTACTGTAAACACC	60	355
58	AC134624-12	RRGA11-085	do	AGCTGAGTTGGAGAGCATGG	ACAAAGCTGATAGGCGAAGG	60	380
59	AC134624-16	RRGA11-086	do	AGGTCAAATCTTCGCAAGC	TAAGCACCTTTTCCCACTGC	56	410
60	AC137751-7	RRGA11-138	a0014E11	CAGCAGCAATCTGATCTCG	AGTCTCCTTCTCCATGTCCG	58	353
61	AC125781-4	RRGA11-136	a0058G18	CCTACGACTCCCAGAAATGC	ATCGTCGTTGTGCTCTTTCG	56	383
62	AC125781-6	RRGA11-137	do	GAGAAGATCACCTTGTCTTTCG	CTCGAGCTCCTTTAGCATCG	60	426
63	AC122143-4	RRGA11-132	a0090F16	TCTCGACCTCAGGAACAACC	GAACTTGTCCCGTTCAGG	54	361
64	AC122143-15	RRGA11-133	a0090F16	TGGACTACGACGAGCTGAGG	CCAGTTCTTGGAGGTGAAGC	60	404
65	AC122143-16	RRGA11-134	do	CAATGCCACATGGAGAAGG	GAAATGGCATCCTGTCAACC	58	367
66	AC122143-17	RRGA11-135	do	AAAGTCGGTTGGCACTATGG	TTCCATACGCAGCTTCTCC	60	408
67	AC125780-20	RRGA11-127	a0030I15	TGACTCTCCTGCTGCTTGC	CTTCTCCGTCGAGATGAAGC	56	382
68	AC120885-20	RRGA11-122	a0042J05	GCCAAACAAGAACCAACAGG	TGCCCTGGATTAGTCTCACC	58	374
69	AC120887-13	RRGA11-121	a0088K21	TCCTGGGCATGATCATAAGG	CCTCAGCTCTTCGATGTTCC	58	401
70	AC120884-1	RRGA11-119	a0017D19	TACACCCTCGAGCTTCTGCG	CCACCATTCTGAACCTCAGC	60	361
71	AC121328-7	RRGA11-117	b0030E22	CCACCACACACAGATTGTCC	CATCTGAGCATCTCGTTTGC	58	350
72	AC136148-15	RRGA11-113	a0029K08	GGGGGTAACATTTCTCATGG	CCTTGTCAATCCCAACAAGC	58	422
73	AC136148-17	RRGA11-114	a0029K08	CCGCTAGACCAACTTGACG	CCTTATCAACCCCAACAAGC	58	355
74	AC135121-1	RRGA11-069	b0089M05	TGCACTGTTGCACTCTCTGG	GCCAATTCATCTGGAAGTGC	58	776
75	AC135121-2	RRGA11-070	do	TGCACAGGATGTGGTAGAGG	TGACTCGCAACATTGCTACC	60	384
76	AC135121-4	RRGA11-071	b0089M05	TGCCAGATCATGCAACTACC	GAAGGTCAGGCCTCTGTAACC	60	438
77	AC135121-8	RRGA11-072	do	AGGAGCACTGGATCATCAGG	TGGAGCTCTCCTTTGTCAGC	58	372
78	AC135121-9	RRGA11-073	do	AGAATGATGGGGACAGAAGG	CTGGCACTTCTTTGCAATCC	60	673

S. no.	Primer name	RGa no.	BAC/PAC	Forward primer	Reverse primer	Tm	Expected product size (bp)
79	AC135121-13	RRGA11-074	do	CGGACTACTTGCCCTCTCTGG	CTGGTACTTGCGCTTGTGG	64	352
80	AC135644-2	RRGA11-175	a0085H07	CGACCAGCTCCTTTCTATGG	CACGGAGGCAGAATTTATCC	60	413
81	AC135644-5	RRGA11-176	do	ATGACCCTCGCACAAAGG	GATCTGAGCCCTGAAAATGC	60	698
82	AC135644-17	RRGA11-177	do	GCAGATGCGAGTGATCTCC	GGTCCGCCACATATTAGC	60	626
83	AC135644-22	RRGA11-178	do	AATGAGGGTCATCTCCATCG	TCCTTGCAGTCTCTTACC	58	444
84	AC135190-7	RRGA11-173	a0064H09	CTCACTGAGCTGACGCTACG	TCATCATGTTGGGACTCC	56	445
85	AC135190-9	RRGA11-174	do	GAGAGGATGCACAGGAAAGC	GCCTGGACAAGCAACTAAGC	66	379
86	AC134923-3	RRGA11-172	b0030I07	GAGAAGTCCCGGCATCTAGC	GTGAGCAACACCATCAATGC	58	487
87	AC134924-14	RRGA11-163	b0076M06	GGGATAGCACAGGGTCTAGC	ACCATGATCTCACCCATGC	56	355
88	AC133609-1	RRGA11-160	a0002C14	ACCTGTCTGTGTCAATGTGG	AAAGCCGAGGTAGGAGAAGC	56	425
89	AC133609-8	RRGA11-161	do	AGCAGAAGAGTTGCCTTTGG	CAATGTAGACGGAGGGATGC	60	457
90	AC133609-12	RRGA11-162	a002C14	GACCTGACATGTGGAAACC	AAGCACCTACACCGATTGG	58	382
91	AC129226-1	RRGA11-152	b0024E08	GAGACGTACGGACAACAGC	CACTTCTCGTCGAGTGATCG	60	409
92	AC129226-4	RRGA11-153	do	AGAACGGCTCCCTTAACAGC	ACCTCCAGCATCACAAACC	60	358
93	AC129226-5	RRGA11-154	do	CGTGTACAGGTTGGTGATGG	GAAGCCTTCCCATGTACACC	60	713
94	AC129226-12	RRGA11-155	do	GCAACAGCAACCTATCTCTGG	GCAACTCCGAGTACACTCC	58	417
95	AC129226-14	RRGA11-156	do	CCTTCTCCCTTCATCAGC	GCTTCTTCTCACGTGACC	60	419
96	AC129226-17	RRGA11-157	do	GAAGAACGGCTCACTTCACG	GCCCTTCTCCTGTAATCACC	60	387
97	AC129226-18	RRGA11-158	do	CACATCATCCGTCTCTTTGG	ACACCCGAAGTCTGACAAGC	60	354
98	AC129226-20	RRGA11-159	do	GTCGTGCATTATCCCATCC	TACTTCTAAAGCCCAACC	60	378
99	AC125783-3	RRGA11-149	b0039K08	GAGACGGCCAGATGTACAGG	CGGTGTTGATCTCACTCTGC	58	540
100	AC108872-13	RRGA11-139	b0079P23	CACAAAGAGGGTTCAATGG	TCTTGTCCTTGATGCTGTGC	58	449

**Table 2.** List of different classes of resistance gene analogues (RGAs) found on the pseudomolecule of chromosome 11 of rice

Sl. no.	Starting position on pseudomolecule	Size of CDS	Dir	Predicted protein function
RRGA11-001	774340	192	+	Putative cyst nematode resistance protein
RRGA11-002	1606391	1326	+	Probable serine/threonine protein kinase
RRGA11-003	2868704	768	-	Serine/threonine protein kinase
RRGA11-004	3513774	330	+	Similar to serine/threonine protein kinase
RRGA11-005	3868311	402	-	Putative serine/threonine protein kinase
RRGA11-006	3899735	537	-	Disease resistance protein like
RRGA11-007	3913928	537	-	Putative disease resistance protein
RRGA11-008	3933226	549	-	Disease resistance protein
RRGA11-009	3939449	555	+	Disease resistance protein
RRGA11-010	5534409	3225	-	Leucine-rich repeat containing protein kinase
RRGA11-011	5719178	3645	-	NBS-LRR disease resistance protein homologue
RRGA11-012	5733182	2502	-	NBS-LRR disease resistance protein homologue
RRGA11-013	5758113	3468	-	NBS-LRR disease resistance protein homologue
RRGA11-014	5760050	321	-	NBS-LRR disease resistance protein homologue
RRGA11-015	5821044	2304	+	Putative <i>Cj2/Cj5</i> disease resistance protein
RRGA11-016	5843385	2748	-	NBS-LRR disease resistance protein homologue
RRGA11-017	5850314	1224	-	NBS-LRR disease resistance protein homologue
RRGA11-018	6350414	2931	+	Putative disease resistance protein
RRGA11-019	6462782	3066	-	NBS-LRR-like protein

Sl. no.	Starting position on pseudomolecule	Size of CDS	Dir	Predicted protein function
RRGA11-020	6472595	3102	-	Putative disease resistance protein
RRGA11-021	6524618	2178	+	Stem rust resistance protein
RRGA11-022	6532579	450	-	NBS-LRR-like protein
RRGA11-023	6548700	2931	+	Putative disease resistance protein
RRGA11-024	6561519	2325	-	NBS-LRR-like protein
RRGA11-025	6567984	2835	-	NBS-LRR disease resistance protein homologue
RRGA11-026	6582952	4416	+	NBS-LRR disease resistance protein homologue
RRGA11-027	6617393	270	+	NBS-LRR-like protein
RRGA11-028	6622543	2346	+	NBS-LRR-like protein
RRGA11-029	6632755	2742	+	NBS-LRR-like protein
RRGA11-030	6765355	1554	+	NBS-LRR disease resistance protein homologue
RRGA11-031	6772273	1536	+	NBS-LRR-like protein
RRGA11-032	6799005	1020	+	NBS-LRR-like protein
RRGA11-033	6802914	1473	+	NBS-LRR-like protein
RRGA11-034	7214691	3000	-	Putative disease resistance protein
RRGA11-035	7228755	2790	-	Putative disease resistance protein
RRGA11-036	7237687	2157	-	Putative disease resistance protein
RRGA11-037	7277433	2304	-	Putative disease resistance protein
RRGA11-038	7591140	3243	+	NBS-LRR-like protein
RRGA11-039	7731868	4302	-	Putative disease resistance protein
RRGA11-040	7802285	2757	-	Disease resistance protein <i>RPMI</i> homologue
RRGA11-041	8371546	2424	-	Disease resistance protein <i>RPMI</i> homologue
RRGA11-042	8580455	2820	+	Disease resistance protein <i>RPMI</i> homologue
RRGA11-043	8583168	390	+	Disease resistance protein <i>RPMI</i> homologue
RRGA11-044	8686155	2658	-	NBS-LRR disease resistance protein homologue
RRGA11-045	8699949	1227	-	Putative bacterial blight-resistance protein
RRGA11-046	8870685	378	-	Putative NBS-LRR resistance protein
RRGA11-047	8883944	2775	+	Putative CC-NBS-LRR resistance protein
RRGA11-048	8900055	579	-	Putative CC-NBS-LRR resistance protein
RRGA11-049	8906667	642	-	Disease resistance protein <i>RPMI</i> homologue
RRGA11-050	8915296	2883	+	Putative CC- NBS-LRR resistance protein
RRGA11-051	9250625	948	+	Putative disease resistance protein
RRGA11-052	9256607	2388	+	Putative disease resistance protein
RRGA11-053	9332878	870	-	Disease resistance protein <i>RPMI</i> homologue
RRGA11-054	9336482	801	-	Disease resistance protein <i>RPMI</i> homologue
RRGA11-055	9488195	2862	+	Disease resistance protein <i>RPMI</i> homologue
RRGA11-056	12931774	4248	-	NBS-LRR disease resistance protein homologue
RRGA11-057	14932935	3048	-	Putative disease resistance protein
RRGA11-058	15299580	750	-	Receptor-like serine/threonine protein kinase
RRGA11-059	15859839	3105	-	Putative NBS-LRR resistance protein
RRGA11-060	15884488	2550	-	Putative NBS-LRR resistance protein
RRGA11-061	15896777	987	-	Putative NBS-LRR resistance protein
RRGA11-062	15908033	915	+	Putative disease resistance protein
RRGA11-063	15921851	2289	+	Putative disease resistance protein
RRGA11-064	15952271	3153	-	<i>RPS2 (Arabidopsis thaliana)</i>

Sl. no.	Starting position on pseudomolecule	Size of CDS	Dir	Predicted protein function
RRGA11-065	15960401	3393	+	Putative NBS-LRR resistance protein
RRGA11-066	16462329	4593	-	Putative NBS-LRR resistance protein
RRGA11-067	16483840	3555	-	Putative disease resistance complex protein
RRGA11-068	16495365	2733	-	Putative disease resistance protein
RRGA11-069	16495460	2397	-	Putative disease resistance protein
RRGA11-070	16504512	3033	-	Putative disease resistance protein
RRGA11-071	16519460	2172	-	Putative disease resistance protein
RRGA11-072	16548317	1806	-	Putative NBS-LRR resistance protein
RRGA11-073	16552181	2796	+	Putative disease resistance complex protein
RRGA11-074	16570760	1209	+	Putative disease resistance complex protein
RRGA11-075	16626201	3198	-	Putative disease resistance complex protein
RRGA11-076	17466543	753	-	Leucine-rich repeat protein LRP-sorghum
RRGA11-077	17472162	228	-	Leucine-rich repeat protein LRP-sorghum
RRGA11-078	17479664	756	-	Leucine-rich repeat protein LRP-sorghum
RRGA11-079	17959782	3930	-	Putative stripe rust resistance protein Yr10
RRGA11-080	17989889	3783	-	Putative stripe rust resistance protein Yr10
RRGA11-081	18949916	750	-	Putative disease resistance protein
RRGA11-082	19176713	1089	+	Putative serine/threonine protein kinase
RRGA11-083	19228992	436	-	Putative stripe rust resistance protein Yr10
RRGA11-084	19241577	2364	+	Putative stripe rust resistance protein Yr10
RRGA11-085	19277363	2775	+	Putative NBS-LRR resistance protein
RRGA11-086	19294315	2913	+	Putative disease resistance protein
RRGA11-087	19408735	1899	+	Putative rust resistance protein
RRGA11-088	19411907	552	+	Putative rust resistance protein
RRGA11-089	19515830	1731	-	<i>Cf2/Cf5</i> disease resistance protein homologue
RRGA11-090	19535936	3918	+	Putative <i>Cf2/Cf5</i> disease resistance protein
RRGA11-091	19561483	2766	+	<i>Cf2/Cf5</i> disease resistance protein
RRGA11-092	19567787	2019	+	Protein kinase <i>Xa-21</i>
RRGA11-093	19603009	1458	-	Putative <i>Cf2/Cf5</i> disease resistance protein
RRGA11-094	19626062	2739	-	Putative disease resistance protein
RRGA11-095	19774229	498	+	Putative <i>Cf2/Cf5</i> disease resistance protein
RRGA11-096	19775024	468	+	Putative <i>Cf2/Cf5</i> disease resistance protein
RRGA11-097	19782631	1761	+	<i>Cf2/Cf5</i> disease resistance protein homologue
RRGA11-098	19796470	4503	+	Putative <i>Cf2/Cf5</i> disease resistance protein
RRGA11-099	19806048	424	+	Putative <i>Cf2/Cf5</i> disease resistance protein
RRGA11-100	19806264	2850	+	<i>Cf2/Cf5</i> disease resistance protein homologue
RRGA11-101	19871478	486	+	Putative <i>Cf2/Cf5</i> disease resistance protein
RRGA11-102	19884037	3369	+	<i>Cf2/Cf5</i> disease resistance protein homologue
RRGA11-103	19896999	2022	+	Putative <i>Cf2/Cf5</i> disease resistance protein
RRGA11-104	19915541	1938	+	Putative <i>Cf2/Cf5</i> disease resistance protein
RRGA11-105	19956076	3402	-	Protein Kinase <i>Xa21</i>
RRGA11-106	19974836	2268	-	Putative <i>Cf2/Cf5</i> disease resistance protein
RRGA11-107	19985672	3207	-	Protein kinase <i>Xa21</i>
RRGA11-108	19993744	3108	-	Protein kinase <i>Xa21</i>
RRGA11-109	20005100	2937	-	Protein kinase <i>Xa21</i>

Sl. no.	Starting position on pseudomolecule	Size of CDS	Dir	Predicted protein function
RRGA11-110	20016606	3114	-	Protein kinase <i>Xa21</i>
RRGA11-111	20027483	2376	-	Protein kinase <i>Xa21</i>
RRGA11-112	20615804	4263	+	Putative NBS-LRR resistance protein
RRGA11-113	21494989	3888	+	Putative NBS-LRR resistance protein
RRGA11-114	21532416	1803	+	Putative NBS-LRR resistance protein
RRGA11-115	21560114	4269	-	Putative NBS-LRR resistance protein
RRGA11-116	21595129	3873	+	Putative NBS-LRR resistance protein
RRGA11-117	22067403	3039	+	Putative resistance protein
RRGA11-118	22112751	723	-	Putative disease resistance protein
RRGA11-119	22157986	861	+	Putative disease resistance protein
RRGA11-120	22302823	927	+	Putative resistance protein
RRGA11-121	22397381	2802	-	Putative NBS-LRR resistance protein
RRGA11-122	22689752	891	+	Putative disease resistance protein
RRGA11-123	22830110	1416	-	Putative serine/threonine protein kinase
RRGA11-124	23402171	2931	+	Disease resistance protein <i>RPMI</i> homologue
RRGA11-125	23404913	4254	+	Disease resistance protein <i>RPMI</i> homologue
RRGA11-126	23454064	1488	+	Disease resistance protein <i>RPMI</i> homologue
RRGA11-127	23548316	1899	+	Putative NBS-LRR resistance protein
RRGA11-128	24002653	810	-	L-zip NBS-LRR (Acc No. AB0179114)
RRGA11-129	24031460	2808	-	Putative NBS-LRR resistance protein
RRGA11-130	24084783	3186	-	L-zip NBS-LRR (Acc No. AB0179114)
RRGA11-131	24282364	1812	+	Serine/threonine protein kinase
RRGA11-132	24292210	1194	+	Leucine-rich repeat protein
RRGA11-133	24360270	429	+	Putative NBS-LRR resistance protein
RRGA11-134	24367200	4335		Putative NBS-LRR resistance protein
RRGA11-135	24373384	4458	+	Putative NBS-LRR resistance protein
RRGA11-136	24434797	4326	+	Putative NBS-LRR resistance protein
RRGA11-137	24448925	714	+	Putative NBS-LRR resistance protein
RRGA11-138	24486073	3054	-	Putative NBS-LRR resistance protein
RRGA11-139	24750519	4032	-	Putative NBS-LRR resistance protein
RRGA11-140	24803273	564	+	Putative NBS-LRR resistance protein
RRGA11-141	24811569	2547	-	Putative NBS-LRR resistance protein
RRGA11-142	24862150	2784	+	Putative NBS-LRR resistance protein
RRGA11-143	24863120	1965	+	Putative NBS-LRR resistance protein
RRGA11-144	24918929	2439	-	Putative NBS-LRR resistance protein
RRGA11-145	24934534	864	+	Putative NBS-LRR resistance protein
RRGA11-146	24935024	2559	+	Putative NBS-LRR resistance protein
RRGA11-147	24939342	2919	+	Putative NBS-LRR resistance protein
RRGA11-148	24987968	1275	-	Putative NBS-LRR resistance protein
RRGA11-149	25312043	1047	-	Putative disease resistance protein
RRGA11-150	25473232	1632	+	Receptor kinase-like protein
RRGA11-151	25483144	1086	+	Serine/threonine protein kinase
RRGA11-152	25579954	1638	-	Receptor kinase-like protein
RRGA11-153	25603889	1647	-	Serine/threonine protein kinase
RRGA11-154	25605415	1614	-	Receptor kinase-like protein

Sl. no.	Starting position on pseudomolecule	Size of CDS	Dir	Predicted protein function
RRGA11-155	25646617	1743	+	Receptor kinase-like protein
RRGA11-156	25653392	927	+	Receptor kinase-like protein
RRGA11-157	25664055	918	+	Receptor kinase-like protein ( <i>Arabidopsis</i> )
RRGA11-158	25670226	2982	+	Receptor kinase-like protein
RRGA11-159	25684637	2445	-	NBS-LRR (cyst nematode resistance protein)
RRGA11-160	25692631	699	-	NBS-LRR (cyst nematode resistance protein)
RRGA11-161	25738270	1371	+	Putative receptor-like protein kinase
RRGA11-162	25758821	1440	+	Putative receptor-like protein kinase
RRGA11-163	25884853	1452	+	S-receptor kinase
RRGA11-164	25968841	1923	+	NBS-LRR-like protein
RRGA11-165	25984033	3096	+	NBS-LRR-like protein
RRGA11-166	25992585	3099	+	NBS-LRR-like protein
RRGA11-167	26004611	2394	+	NBS-LRR-like protein
RRGA11-168	26042998	2094	+	NBS-LRR-like protein
RRGA11-169	26057956	2898	+	NBS-LRR-like protein
RRGA11-170	26064770	2520	+	NBS-LRR-like protein
RRGA11-171	26072862	2823	+	NBS-LRR-like protein
RRGA11-172	26151007	2718	+	Putative disease resistance protein
RRGA11-173	26320517	1068	-	Putative cyst nematode resistance protein
RRGA11-174	26328704	1758	-	Putative cyst nematode resistance protein
RRGA11-175	26412798	2853	+	Putative disease resistance protein
RRGA11-176	26428166	2997	-	Putative disease resistance protein
RRGA11-177	26516051	3288	+	Putative disease resistance protein
RRGA11-178	26542493	1362	+	Putative disease resistance protein
RRGA11-179	26545017	1197	+	Putative disease resistance protein
RRGA11-180	26608731	2463	+	Putative resistance protein
RRGA11-181	26616504	1917	+	Putative disease resistance protein
RRGA11-182	26629250	1584	+	Putative disease resistance protein
RRGA11-183	26641770	954	+	Putative stripe rust resistance protein Yr10
RRGA11-184	26650935	1755	+	Putative stripe rust resistance protein Yr10
RRGA11-185	27233113	2529	+	Putative leucine-rich repeat-containing protein
RRGA11-186	27235152	576	+	Putative leucine-rich repeat-containing protein
RRGA11-187	27237951	3309	+	Putative leucine-rich repeat-containing protein
RRGA11-188	27280838	3186	+	<i>Oryza sativa</i> leucine-rich repeat-containing protein
RRGA11-189	27291194	2643	-	Putative leucine-rich repeat-containing protein
RRGA11-190	27299459	2256	-	<i>Oryza sativa</i> leucine-rich repeat-containing protein
RRGA11-191	27305107	3324	+	<i>Oryza sativa</i> leucine-rich repeat-containing protein
RRGA11-192	27315485	1359	-	Putative leucine-rich repeat-containing protein
RRGA11-193	27315523	3177	-	Putative leucine-rich repeat-containing protein
RRGA11-194	27467261	2475	+	Stripe rust resistance protein Yr10
RRGA11-195	27622480	3408	-	NBS-LRR protein

CDS, complementary DNA sequence