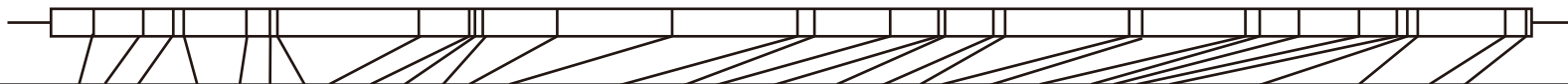


**A**

DTH8

894 bp

100 bp



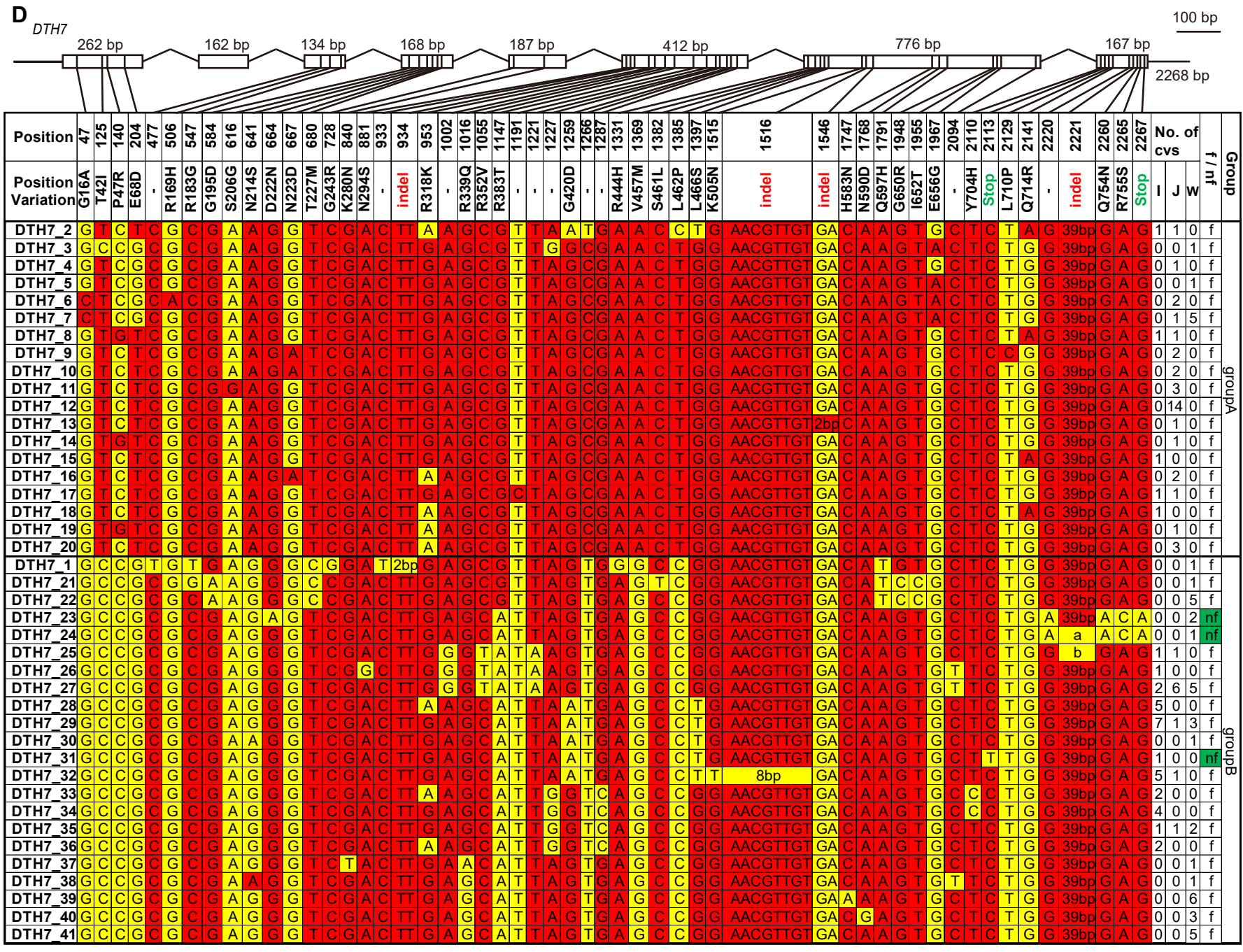
Position	26	56	74	80	118	132	139	222	256	261	282	306	375	451	461	507	536	539	569	576	651	659	712	730	754	790	813	819	825	878	893	No. of cvs			Group
	Position variation	H9L	L19S	E25A	Stop	S40G	-	G47S	-	S86A	-	-	-	-	Stop	D154A	E169D	-	-	Y190S	-	-	D220V	indel	A244T	G252S	I264V	-	indel	indel	Stop	N298S	I	J	
DTH8_1	A	T	A	a	A	C	G	T	T	G	G	A	C	GAGAAGGC	A	G	GCG	3bp	A	C	C	A	GCG	G	G	A	A	6bp	GCGG4	TT	A	0	1	1	f
DTH8_2	A	T	A	a	A	C	G	G	T	G	G	A	C	8bp	A	G	GCG	3bp	A	C	C	A	GCG	G	G	A	A	6bp	GCGG4	TT	A	4	0	0	nf
DTH8_3	A	T	A	a	A	C	G	G	T	G	G	A	C	GAGAAGGC	A	G	GCG	GCG	A	C	C	A	GCG	G	G	A	A	6bp	GCGG4	TT	A	0	0	10	f
DTH8_4	A	T	A	a	A	C	G	G	T	G	G	A	C	GAGAAGGC	A	G	GCG	3bp	A	C	C	A	GCG	G	G	A	A	6bp	GCGG4	TT	A	0	34	1	f
DTH8_5	A	T	A	19bp	A	C	G	G	T	G	G	A	C	GAGAAGGC	A	G	GCG	3bp	A	C	C	A	GCG	G	G	A	A	6bp	GCGG4	TT	A	0	1	0	nf
DTH8_6	T	C	C	a	A	T	G	G	G	G	G	C	C	GAGAAGGC	C	G	3bp	3bp	C	C	C	C	GCG	G	G	A	A	AGGCGG	GCGG4	GA	G	0	0	7	f
DTH8_7	A	C	C	a	A	C	G	G	G	G	A	C	A	GAGAAGGC	C	T	GCG	3bp	C	C	C	C	GCG	G	G	A	C	6bp	12bp	GA	G	0	0	1	nf
DTH8_8	A	C	C	a	A	C	G	G	G	G	G	C	C	GAGAAGGC	C	T	GCG	3bp	C	C	C	C	GCG	G	G	A	C	6bp	12bp	GA	G	0	0	1	nf
DTH8_9	A	C	C	a	A	C	G	G	G	G	G	C	C	GAGAAGGC	C	G	3bp	3bp	C	A	C	C	GCG	A	G	G	C	6bp	12bp	GA	G	0	0	2	nf
DTH8_10	A	C	C	a	A	C	A	G	G	A	G	C	C	GAGAAGGC	C	G	3bp	3bp	C	A	C	C	GCG	G	G	A	C	6bp	12bp	GA	G	0	0	1	nf
DTH8_11	A	C	C	a	A	C	G	G	G	G	G	C	C	GAGAAGGC	C	G	3bp	3bp	C	A	C	C	GCG	G	G	A	C	6bp	12bp	GA	G	0	0	1	nf
DTH8_12	A	C	C	a	G	C	G	G	G	G	G	C	C	GAGAAGGC	C	G	3bp	3bp	C	C	C	C	3bp	G	G	A	A	6bp	GCGG3	TT	G	0	0	3	f
DTH8_13	A	C	C	a	A	C	G	G	G	G	G	C	C	GAGAAGGC	C	G	GCG	GCG	C	C	T	C	GCG	G	G	A	A	6bp	GCG3	TT	G	1	0	0	f
DTH8_14	A	C	C	a	A	C	G	G	G	G	G	C	C	GAGAAGGC	C	G	GCG	GCG	C	C	T	C	GCG	G	G	A	A	6bp	GCGG4	TT	G	7	8	5	f
DTH8_15	A	C	C	a	A	C	G	G	G	G	G	C	C	GAGAAGGC	C	G	GCG	GCG	C	C	T	C	GCG	G	G	A	A	6bp	GCG3	TT	G	18	3	11	f
DTH8_16	A	C	C	a	A	C	G	G	G	G	G	C	C	GAGAAGGC	C	G	3bp	3bp	C	C	T	C	GCG	G	G	A	A	6bp	GCGG4	TT	G	3	0	1	f
DTH8_17	A	C	C	a	A	C	G	G	G	G	G	C	C	GAGAAGGC	C	G	3bp	3bp	C	C	C	C	GCG	G	A	A	A	6bp	GCGG4	TT	G	0	0	8	f
DTH8_18	A	C	C	a	A	C	G	G	G	G	G	C	C	GAGAAGGC	C	G	3bp	3bp	C	C	C	C	GCG	G	G	A	A	6bp	GCGG4	TT	G	0	0	3	f

groupB

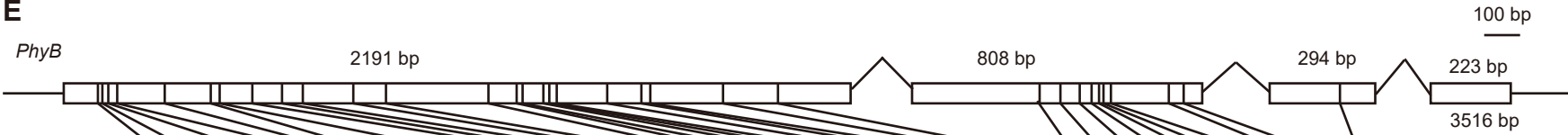
groupA





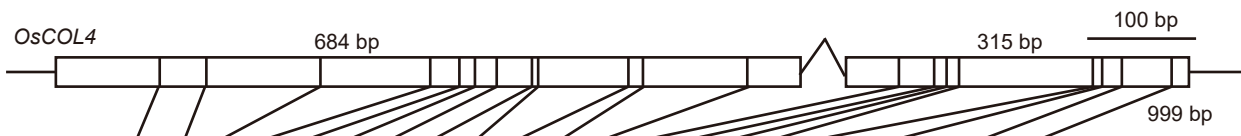


E

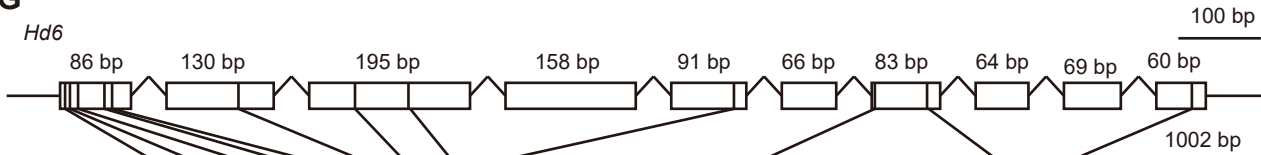


Position	96	104	124	150	282	412	436	525	605	663	808	899	1183	1263	1281	1338	1344	1368	1515	1606	1638	1833	1986	2546	2604	2658	2893	2914	2725	2745	2908	2947	3193	No. of cvs			Group	
	Position variation	T35M	indel	-	-	E138K	indel	-	R202K	-	H270Y	S300N	A395S	-	-	-	-	-	E505D	P536S	-	-	-	N849I	-	K886N	T898M	E905V	A909T	-	D970N	Stop	V1065	I	J	W		f / nf
PhyB_2	C	C	GGCGGG	C	G	G	CTGTCGCCC	C	G	C	C	A	T	C	C	C	A	G	A	C	T	G	G	A	C	T	C	A	G	T	G	A	G	0	0	2	f	groupA
PhyB_3	C	C	GGCGGG	C	G	G	CTGTCGCCC	C	G	C	T	A	T	C	C	C	G	G	A	C	T	G	A	A	C	T	C	A	G	T	G	A	G	0	6	0	f	
PhyB_4	C	C	GGCGGG	C	G	G	CTGTCGCCC	C	G	C	T	A	T	C	C	C	G	G	A	C	T	G	G	A	C	T	C	A	G	T	G	A	G	0	1	0	f	
PhyB_5	C	C	GGCGGG	C	G	G	CTGTCGCCC	C	G	C	T	A	T	C	C	C	G	G	A	C	T	G	G	A	C	T	C	A	G	T	G	A	G	1	30	0	f	
PhyB_7	C	C	GGCGGG	C	C	G	CTGTCGCCC	C	G	C	C	G	T	C	C	C	G	G	A	C	T	A	G	A	C	T	C	A	G	T	G	A	G	0	1	0	f	
PhyB_28	C	C	GGCGGG	A	G	G	CTGTCGCCC	C	A	C	C	G	G	C	C	C	G	G	A	C	C	A	G	A	C	T	C	A	A	T	G	A	G	0	0	1	f	
PhyB_1	G	C	GGCGGG	C	G	G	CTGTCGCCC	C	G	T	C	G	G	T	C	C	G	G	A	C	C	A	G	A	C	A	C	A	G	T	G	A	G	0	0	2	f	groupB
PhyB_6	C	C	GGCGGG	C	G	G	CTGTCGCCC	C	G	T	C	G	G	C	C	T	G	G	T	C	C	A	G	A	C	T	C	A	G	T	G	A	G	0	0	6	f	
PhyB_8	C	C	GGCGGG	C	C	G	CTGTCGCCC	C	G	C	C	G	T	C	C	C	G	G	A	C	C	A	A	A	C	T	C	A	G	T	G	A	G	0	1	0	f	
PhyB_9	C	C	GGCGGG	A	C	G	CTGTCGCCC	T	G	C	C	G	G	C	C	C	G	G	A	T	C	A	G	A	C	T	C	A	G	C	G	A	G	0	0	1	f	
PhyB_10	C	C	GGCGGG	A	C	G	CTGTCGCCC	T	G	C	C	G	G	C	C	C	G	G	A	C	C	A	G	A	C	T	C	A	G	T	G	A	G	0	0	1	f	
PhyB_11	C	C	GGCGGG	C	C	G	CTGTCGCCC	T	G	C	C	G	G	C	C	C	G	G	A	C	C	A	G	A	C	T	C	A	G	T	G	A	G	0	0	1	f	
PhyB_12	C	C	GGCGGG	C	C	G	CTGTCGCCC	T	G	C	C	G	G	C	C	C	G	G	A	T	C	A	G	A	C	T	C	A	G	T	G	A	A	1	0	0	f	
PhyB_13	C	C	GGCGGG	C	C	A	CTGTCGCCC	T	G	C	C	G	G	C	C	C	G	G	A	T	C	A	G	A	C	T	C	A	G	T	G	A	G	1	0	0	f	
PhyB_14	C	C	GGCGGG	C	C	G	CTGTCGCCC	C	G	C	C	G	G	C	C	C	G	G	A	T	C	A	G	A	C	T	C	A	G	T	G	A	G	0	0	1	f	
PhyB_15	C	C	GGCGGG	C	C	G	CTGTCGCCC	T	G	C	C	G	G	C	C	C	G	G	A	T	C	A	G	A	C	T	C	A	G	T	G	A	G	0	0	1	f	
PhyB_16	C	C	GGCGGG	C	C	G	9bp	T	G	C	C	G	G	C	C	C	G	G	A	T	C	A	G	A	C	T	C	A	G	T	G	A	G	0	0	1	f	
PhyB_17	C	C	GGCGGG	C	C	G	CTGTCGCCC	T	G	C	C	G	G	C	C	C	G	G	A	T	C	A	G	A	C	T	C	A	G	T	G	A	G	28	6	17	f	
PhyB_18	C	C	GGCGGG	C	C	G	CTGTCGCCC	T	G	C	C	G	G	C	C	C	G	G	A	T	C	A	G	A	C	T	C	A	G	T	G	T	G	1	0	0	nf	
PhyB_19	C	C	6bp	C	G	G	CTGTCGCCC	C	G	C	C	G	G	C	C	C	G	G	A	C	C	A	G	T	C	T	C	T	G	T	G	A	G	0	0	1	f	
PhyB_20	C	C	6bp	C	G	G	CTGTCGCCC	C	G	C	C	G	G	C	C	C	G	G	A	C	C	A	G	A	C	T	T	T	G	T	G	A	G	0	0	1	f	
PhyB_21	C	C	6bp	C	G	G	CTGTCGCCC	C	G	C	C	G	G	C	C	C	G	G	A	C	C	A	G	A	C	T	C	T	G	T	G	A	G	0	0	2	f	
PhyB_22	C	C	GGCGGG	A	G	G	CTGTCGCCC	C	G	C	C	G	G	C	C	C	G	G	A	C	C	A	G	A	C	T	C	A	G	C	G	A	G	0	0	3	f	
PhyB_23	C	C	GGCGGG	A	G	G	CTGTCGCCC	C	G	C	C	G	G	C	C	C	G	A	A	C	C	A	G	A	C	T	C	A	G	T	G	A	G	0	0	1	f	
PhyB_24	C	T	GGCGGG	A	G	G	CTGTCGCCC	C	G	C	C	G	G	C	C	C	G	G	A	C	C	A	G	A	C	T	C	A	G	T	G	A	G	0	0	1	f	
PhyB_25	C	C	GGCGGG	A	G	G	CTGTCGCCC	C	A	C	C	G	G	C	C	C	G	G	A	C	C	A	G	A	C	T	C	A	G	T	G	A	G	0	0	2	f	
PhyB_26	C	C	GGCGGG	A	G	G	CTGTCGCCC	C	G	C	C	G	G	C	C	C	G	G	A	C	C	A	G	A	C	T	C	A	G	T	G	A	G	0	0	1	f	
PhyB_27	C	C	GGCGGG	A	G	G	CTGTCGCCC	C	A	C	C	G	G	C	C	C	G	G	A	C	C	A	G	A	T	T	C	A	A	T	G	A	G	0	0	1	f	

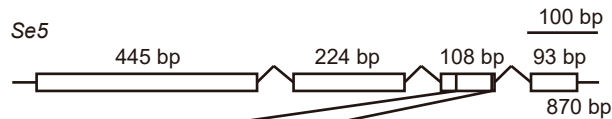
F



Position	96	138	243	344	370	385	404	438	442	526	540	634	733	765	777	788	911	919	938	984	No. of cvs			f / nt	Group
Position Variation	-	-	-	A115V	A124T	P129T	A135E	-	D148N	D176Y	-	N212D	A272S	-	K286N	E290A	T331N	indel	A340E	-					
OsCOL4_16	C	G	C	C	G	C	C	T	G	G	C	G	G	G	C	C	C	GCCGAC	C	C	0	1	1	f	groupA
OsCOL4_17	C	G	C	C	A	C	C	T	G	G	C	G	T	G	G	C	C	GCCGAC	C	C	0	1	0	f	
OsCOL4_18	C	G	C	C	G	C	C	T	G	G	C	G	T	G	G	C	C	GCCGAC	C	C	1	26	3	f	
OsCOL4_1	T	G	C	C	G	C	C	C	G	G	C	A	G	G	G	A	C	GCCGAC	C	C	0	0	5	f	groupB
OsCOL4_2	C	A	C	C	G	A	C	C	G	G	C	G	G	G	C	C	C	GCCGAC	C	C	7	1	5	f	
OsCOL4_3	C	G	C	C	G	A	C	C	G	G	C	G	G	C	G	C	C	GCCGAC	C	C	2	0	1	f	
OsCOL4_4	C	G	C	C	G	A	C	C	G	G	C	G	G	C	G	C	C	GCCGAC	A	C	0	0	1	f	
OsCOL4_5	C	G	C	T	G	A	C	C	G	G	C	G	T	G	G	C	C	GCCGAC	C	C	0	0	1	f	
OsCOL4_6	C	G	C	T	G	A	C	C	G	G	C	G	G	G	C	C	C	GCCGAC	C	C	8	7	4	f	
OsCOL4_7	C	G	C	T	G	A	C	C	G	G	C	G	G	G	C	C	C	GCCGAC	C	C	2	0	0	f	
OsCOL4_8	C	G	C	C	G	C	A	C	A	G	C	G	G	G	G	C	C	GCCGAC	C	C	0	0	1	f	
OsCOL4_9	C	G	A	C	G	C	C	C	G	G	A	G	G	G	G	C	C	GCCGAC	C	C	0	0	1	f	
OsCOL4_10	C	G	A	C	G	C	C	C	G	G	C	G	G	G	G	C	C	GCCGAC	C	G	0	0	5	f	
OsCOL4_11	C	G	A	C	G	C	C	C	G	G	C	G	G	G	G	C	C	GCCGAC	C	C	6	2	5	f	
OsCOL4_12	C	G	A	C	G	C	C	C	G	G	C	G	G	G	G	C	C	6bp	C	C	0	0	2	f	
OsCOL4_13	C	G	C	C	G	C	C	C	G	G	C	G	G	G	G	C	C	GCCGAC	C	C	2	1	18	f	
OsCOL4_14	C	G	C	C	G	C	A	C	G	G	C	G	G	G	G	C	C	GCCGAC	C	C	0	0	2	f	
OsCOL4_15	C	G	C	C	G	A	C	C	G	G	C	G	G	G	G	C	A	GCCGAC	C	C	1	0	0	f	
OsCOL4_19	C	G	C	C	G	C	C	C	G	T	C	G	G	G	G	C	C	GCCGAC	C	C	0	0	1	f	
OsCOL4_20	C	A	C	C	G	C	C	C	G	G	C	G	G	G	G	C	C	GCCGAC	C	C	0	0	1	f	
OsCOL4_21	C	G	C	C	G	A	C	C	G	G	C	G	G	G	G	C	C	GCCGAC	C	C	2	0	1	f	
OsCOL4_22	C	G	C	C	G	C	C	C	G	G	C	G	G	G	G	C	C	GCCGAC	C	G	0	0	1	f	

**G**

Position	6	11	22	55	64	176	271	336	645	727	792	986	No. of cvs			f / nf
Position Variation	.	A4G	A8P	W19R	E22K	K59R	Stop	.	.	indel	.	R329T	I	J	W	
Hd6_1	G	C	G	T	G	A	A	C	C	GTACTTGG AACAGAAGCACTAAATGCTTA	T	G	35	30	42	f
Hd6_2	G	C	G	T	G	A	A	C	C	GTACTTGG AACAGAAGCACTAAATGCTTA	T	C	0	0	1	f
Hd6_3	G	C	G	T	G	A	A	C	T	GTACTTGG AACAGAAGCACTAAATGCTTA	T	G	0	0	1	f
Hd6_4	A	G	C	T	A	A	A	C	C	GTACTTGG AACAGAAGCACTAAATGCTTA	T	G	0	0	1	f
Hd6_5	G	C	G	T	G	G	A	C	C	GTACTTGG AACAGAAGCACTAAATGCTTA	T	G	0	0	1	f
Hd6_6	G	C	C	T	G	A	A	C	C	GTACTTGG AACAGAAGCACTAAATGCTTA	T	G	0	0	1	f
Hd6_7	G	C	G	T	G	A	A	T	C	GTACTTGG AACAGAAGCACTAAATGCTTA	T	G	0	0	2	f
Hd6_8	G	G	C	T	A	A	A	C	C	GTACTTGG AACAGAAGCACTAAATGCTTA	T	G	0	0	3	f
Hd6_9	A	C	C	T	A	A	A	C	C	GTACTTGG AACAGAAGCACTAAATGCTTA	T	G	0	0	1	f
Hd6_10	G	C	G	C	G	A	A	C	C	GTACTTGG AACAGAAGCACTAAATGCTTA	T	G	0	2	0	f
Hd6_11	G	C	G	T	G	A	A	C	C	GTACTTGG AACAGAAGCACTAAATGCTTA	C	G	0	3	0	f
Hd6_12	G	C	G	T	G	A	T	C	C	GTACTTGG AACAGAAGCACTAAATGCTTA	T	G	0	9	0	nf
Hd6_13	G	C	G	T	G	A	A	C	C	29bp	T	G	0	1	0	f

**H**

Position	700	771	No. of cvs			f / nf
Position Variation	.	.	I	J	W	
Se5_1	T	C	9	1	9	f
Se5_2	C	A	0	0	1	f
Se5_3	C	C	25	44	51	f