

Table 5. Characteristics of paired repeat sequences in *Helicobacter pylori* strain J99

Chromosome	Chromosome	Length of	Distance	Sequences
location of	location of	Repeat	between repeat	flanked by paired repeats
repeat 1	repeat 2	sequence, bp	sequences, bp	in recombination hotspots*
5152	5167	113	15	JHP0006/JHP0007 intergenic region
5152	5182	98	30	JHP0006/JHP0007 intergenic region
5152	5197	83	45	JHP0006/JHP0007 intergenic region
5152	5212	68	60	JHP0006/JHP0007 intergenic region
5152	5227	53	75	JHP0006/JHP0007 intergenic region
5152	5242	38	90	JHP0006/JHP0007 intergenic region
5387	23501	29	18114	
5403	912753	25	736481	
5492	23594	45	18102	
5593	231956	27	226363	
5848	232223	25	226375	
5871	1224971	38	424731	
6162	913528	24	736465	
6162	1297653	24	352340	
7316	236870	24	229554	
7322	1298906	33	352247	
7401	743333	24	735932	
7412	1298995	31	352248	
23039	1455388	34	211482	
23039	1455705	30	211165	
23094	1455442	109	211483	
23121	1562753	82	104199	
23556	741446	31	717890	
23721	912973	24	754579	
23721	1297098	24	370454	
23798	913050	27	754579	
23798	1297175	27	370454	
24012	235983	26	211971	
25284	914698	32	754417	
25469	1298894	35	370406	
25524	743297	30	717773	

Chromosome	Chromosome	Length of	Distance	Sequences
location of	location of	Repeat	between repeat	flanked by paired repeats
repeat 1	repeat 2	sequence, bp	sequences, bp	in recombination hotspots*
25867	25973	26	106	
31447	1012854	34	662424	
33610	270296	26	236686	
50637	53118	48	2481	
59505	59946	28	441	Internal to JHP0050
59505	59974	32	469	Internal to JHP0050
59511	59721	31	210	Internal to JHP0050
59513	59639	24	126	Internal to JHP0050
59543	59753	61	210	Internal to JHP0050
59639	59723	24	84	Internal to JHP0050
59639	59982	25	343	Internal to JHP0050
59721	59980	26	259	Internal to JHP0050
59946	59974	28	28	Internal to JHP0050
61471	1150540	24	554762	
83061	105572	29	22511	
123914	1237714	37	530031	
124059	1237871	69	530019	
124146	1237958	29	530019	
124177	1237989	34	530019	
124212	1238024	71	530019	
124296	1238108	46	530019	
124344	1238156	35	530019	
124530	124656	28	126	
124560	1238372	27	530019	
124560	1238393	27	529998	
124560	1238414	27	529977	
124560	1238435	27	529956	
124560	1238456	26	529935	
125164	1238874	28	530121	
132447	1153101	25	623177	
132457	167997	25	35540	
134744	241344	52	106600	
143764	145465	26	1701	

Chromosome	Chromosome	Length of	Distance	Sequences
location of	location of	Repeat	between repeat	flanked by paired repeats
repeat 1	repeat 2	sequence, bp	sequences, bp	in recombination hotspots*
143994	145695	25	1701	
144631	146338	35	1707	
163525	230603	24	67078	
168001	1106593	24	705239	
168037	718938	28	550901	
168040	995085	28	816786	
182385	1488418	26	337798	
231802	741431	32	509629	
231805	1224530	32	651106	
231892	1224617	29	651106	
232096	913087	26	680991	
232096	1297212	26	578715	
232246	741866	32	509620	
233776	1226342	26	651265	
236980	1226442	41	654369	
236985	743373	33	506388	
256312	257125	27	813	
285859	1622985	24	306705	
285883	994989	26	709106	
285937	995042	26	709105	
285945	309419	25	23474	
285945	1153122	28	776654	
309410	1153113	34	800128	
328096	617585	28	289489	
328125	617614	90	289489	
328268	617758	35	289490	
328313	617797	28	289484	
328775	617879	37	289104	
329045	618031	26	288986	
329528	618242	24	288714	
329606	618321	25	288715	
344932	345040	24	108	
345054	345162	53	108	

Chromosome	Chromosome	Length of	Distance	Sequences
location of	location of	Repeat	between repeat	flanked by paired repeats
repeat 1	repeat 2	sequence, bp	sequences, bp	in recombination hotspots*
345352	345460	35	108	
373659	1213931	26	803559	
409966	931123	43	521157	
409979	930829	30	520850	
448203	448212	49	9	
448203	448221	40	18	
448203	448230	31	27	
461948	952938	25	490990	
462019	952994	301	490975	
462347	953322	726	490975	
469523	470981	26	1458	
497375	497681	28	306	
504489	504498	26	9	
510166	547926	37	37760	
519730	520399	62	669	Internal to JHP0476 (<i>cagY</i>)
519739	520291	50	552	Internal to JHP0476 (<i>cagY</i>)
519739	520729	53	990	Internal to JHP0476 (<i>cagY</i>)
519739	520957	53	1218	Internal to JHP0476 (<i>cagY</i>)
519739	521185	48	1446	Internal to JHP0476 (<i>cagY</i>)
519739	521944	53	2205	Internal to JHP0476 (<i>cagY</i>)
519747	519864	45	117	Internal to JHP0476 (<i>cagY</i>)
519762	520107	30	345	Internal to JHP0476 (<i>cagY</i>)
519793	520138	25	345	Internal to JHP0476 (<i>cagY</i>)
519793	520345	53	552	Internal to JHP0476 (<i>cagY</i>)
519864	520299	42	435	Internal to JHP0476 (<i>cagY</i>)
519864	520416	105	552	Internal to JHP0476 (<i>cagY</i>)
519864	520737	105	873	Internal to JHP0476 (<i>cagY</i>)
519864	520965	105	1101	Internal to JHP0476 (<i>cagY</i>)
519864	521193	40	1329	Internal to JHP0476 (<i>cagY</i>)
519864	521952	66	2088	Internal to JHP0476 (<i>cagY</i>)
519879	520107	37	228	Internal to JHP0476 (<i>cagY</i>)
519937	521266	32	1329	Internal to JHP0476 (<i>cagY</i>)
519959	521609	46	1650	Internal to JHP0476 (<i>cagY</i>)

Chromosome	Chromosome	Length of	Distance	Sequences
location of	location of	Repeat	between repeat	flanked by paired repeats
repeat 1	repeat 2	sequence, bp	sequences, bp	in recombination hotspots*
519970	520522	24	552	Internal to JHP0476 (<i>cagY</i>)
519970	520843	24	873	Internal to JHP0476 (<i>cagY</i>)
519970	521071	24	1101	Internal to JHP0476 (<i>cagY</i>)
519970	521299	24	1329	Internal to JHP0476 (<i>cagY</i>)
519976	521743	29	1767	Internal to JHP0476 (<i>cagY</i>)
519995	520547	41	552	Internal to JHP0476 (<i>cagY</i>)
519995	520868	76	873	Internal to JHP0476 (<i>cagY</i>)
519995	521096	76	1101	Internal to JHP0476 (<i>cagY</i>)
519995	521324	41	1329	Internal to JHP0476 (<i>cagY</i>)
519995	521531	43	1536	Internal to JHP0476 (<i>cagY</i>)
520018	521668	29	1650	Internal to JHP0476 (<i>cagY</i>)
520107	520314	27	207	Internal to JHP0476 (<i>cagY</i>)
520107	520431	37	324	Internal to JHP0476 (<i>cagY</i>)
520107	520752	37	645	Internal to JHP0476 (<i>cagY</i>)
520107	520980	37	873	Internal to JHP0476 (<i>cagY</i>)
520107	521208	25	1101	Internal to JHP0476 (<i>cagY</i>)
520107	521967	37	1860	Internal to JHP0476 (<i>cagY</i>)
520135	520342	28	207	Internal to JHP0476 (<i>cagY</i>)
520186	520624	86	438	Internal to JHP0476 (<i>cagY</i>)
520228	521443	44	1215	Internal to JHP0476 (<i>cagY</i>)
520228	521881	44	1653	Internal to JHP0476 (<i>cagY</i>)
520228	522088	35	1860	Internal to JHP0476 (<i>cagY</i>)
520228	522310	29	2082	Internal to JHP0476 (<i>cagY</i>)
520273	520939	68	666	Internal to JHP0476 (<i>cagY</i>)
520273	521167	66	894	Internal to JHP0476 (<i>cagY</i>)
520280	520718	61	438	Internal to JHP0476 (<i>cagY</i>)
520280	521495	33	1215	Internal to JHP0476 (<i>cagY</i>)
520280	521726	33	1446	Internal to JHP0476 (<i>cagY</i>)
520280	521933	61	1653	Internal to JHP0476 (<i>cagY</i>)
520291	520408	50	117	Internal to JHP0476 (<i>cagY</i>)
520408	520729	180	321	Internal to JHP0476 (<i>cagY</i>)
520408	520957	180	549	Internal to JHP0476 (<i>cagY</i>)
520408	521185	48	777	Internal to JHP0476 (<i>cagY</i>)

Chromosome	Chromosome	Length of	Distance	Sequences
location of	location of	Repeat	between repeat	flanked by paired repeats
repeat 1	repeat 2	sequence, bp	sequences, bp	in recombination hotspots*
520408	521944	74	1536	Internal to JHP0476 (<i>cagY</i>)
520489	521266	155	777	Internal to JHP0476 (<i>cagY</i>)
520522	521620	24	1098	Internal to JHP0476 (<i>cagY</i>)
520528	521512	60	984	Internal to JHP0476 (<i>cagY</i>)
520666	521443	85	777	Internal to JHP0476 (<i>cagY</i>)
520666	521881	137	1215	Internal to JHP0476 (<i>cagY</i>)
520666	522088	35	1422	Internal to JHP0476 (<i>cagY</i>)
520666	522310	29	1644	Internal to JHP0476 (<i>cagY</i>)
520711	521719	40	1008	Internal to JHP0476 (<i>cagY</i>)
520718	520946	287	228	Internal to JHP0476 (<i>cagY</i>)
520718	521174	59	456	Internal to JHP0476 (<i>cagY</i>)
520810	521266	99	456	Internal to JHP0476 (<i>cagY</i>)
520843	521620	24	777	Internal to JHP0476 (<i>cagY</i>)
520849	521512	62	663	Internal to JHP0476 (<i>cagY</i>)
520891	521668	29	777	Internal to JHP0476 (<i>cagY</i>)
520946	521495	33	549	Internal to JHP0476 (<i>cagY</i>)
520946	521726	33	780	Internal to JHP0476 (<i>cagY</i>)
520946	521933	85	987	Internal to JHP0476 (<i>cagY</i>)
521038	521266	99	228	Internal to JHP0476 (<i>cagY</i>)
521071	521620	24	549	Internal to JHP0476 (<i>cagY</i>)
521077	521512	62	435	Internal to JHP0476 (<i>cagY</i>)
521119	521668	29	549	Internal to JHP0476 (<i>cagY</i>)
521174	521495	33	321	Internal to JHP0476 (<i>cagY</i>)
521174	521726	33	552	Internal to JHP0476 (<i>cagY</i>)
521174	521933	59	759	Internal to JHP0476 (<i>cagY</i>)
521236	521995	27	759	Internal to JHP0476 (<i>cagY</i>)
521299	521620	24	321	Internal to JHP0476 (<i>cagY</i>)
521305	521512	60	207	Internal to JHP0476 (<i>cagY</i>)
521418	521856	110	438	Internal to JHP0476 (<i>cagY</i>)
521422	522067	56	645	Internal to JHP0476 (<i>cagY</i>)
521424	522291	48	867	Internal to JHP0476 (<i>cagY</i>)
521488	521719	42	231	Internal to JHP0476 (<i>cagY</i>)
521626	521743	38	117	Internal to JHP0476 (<i>cagY</i>)

Chromosome	Chromosome	Length of	Distance	Sequences
location of	location of	Repeat	between repeat	flanked by paired repeats
repeat 1	repeat 2	sequence, bp	sequences, bp	in recombination hotspots*
521719	521926	40	207	Internal to JHP0476 (<i>cagY</i>)
521860	522067	56	207	Internal to JHP0476 (<i>cagY</i>)
521862	522291	48	429	Internal to JHP0476 (<i>cagY</i>)
522069	522291	48	222	Internal to JHP0476 (<i>cagY</i>)
522908	523346	32	438	Internal to JHP0476 (<i>cagY</i>)
522940	523363	52	423	Internal to JHP0476 (<i>cagY</i>)
522950	522983	25	33	Internal to JHP0476 (<i>cagY</i>)
522983	523373	25	390	Internal to JHP0476 (<i>cagY</i>)
523015	523405	88	390	Internal to JHP0476 (<i>cagY</i>)
545720	545855	39	135	
546393	546495	49	102	
547193	908970	28	361777	
547222	908999	41	361777	
616674	952032	30	335358	
624234	625290	51	1056	JHP0562 and 5' region of JHP0563
624286	625342	46	1056	3' region of JHP0562 and 5' region of JHP0563
624333	625389	57	1056	3' region of JHP0562 and 5' region of JHP0563
624513	625572	38	1059	3' region of JHP0562 and 5' region of JHP0563
624552	625611	29	1059	3' region of JHP0562 and 5' region of JHP0563
624582	625641	26	1059	3' region of JHP0562 and 5' region of JHP0563
624906	626266	30	1360	3' region of JHP0562 and 5' region of JHP0563
624937	626297	35	1360	3' region of JHP0562 and 5' region of JHP0563
625187	626541	39	1354	3' region of JHP0562 and 5' region of JHP0563
625983	626037	71	54	internal region of JHP0563
659175	1111952	24	452777	
659200	1111977	187	452777	
659299	659320	130	21	Internal to JHP0596 (<i>fucT</i>)
659299	659341	109	42	Internal to JHP0596 (<i>fucT</i>)
659299	659362	88	63	Internal to JHP0596 (<i>fucT</i>)
659299	659383	67	84	Internal to JHP0596 (<i>fucT</i>)
659299	659404	46	105	Internal to JHP0596 (<i>fucT</i>)
659299	659425	25	126	Internal to JHP0596 (<i>fucT</i>)
659299	1112097	67	452798	

Chromosome	Chromosome	Length of	Distance	Sequences
location of	location of	Repeat	between repeat	flanked by paired repeats
repeat 1	repeat 2	sequence, bp	sequences, bp	in recombination hotspots*
659299	1112118	46	452819	
659299	1112139	25	452840	
659320	1112076	88	452756	
659341	1112076	88	452735	
659362	1112076	471	452714	
659383	1112076	67	452693	
659404	1112076	46	452672	
659425	1112076	25	452651	
659834	1112548	143	452714	
659978	1112692	167	452714	
660146	1112860	86	452714	
660233	1112947	94	452714	
660328	1113042	71	452714	
718941	995085	25	276144	
726248	962501	26	236253	
726293	962547	490	236254	
726485	1473876	31	747391	
726811	963065	26	236254	
726862	963131	33	236269	
726896	963165	28	236269	
726926	963195	34	236269	
727036	963338	26	236302	
727063	963365	26	236302	
727090	963392	47	236302	
727392	963679	28	236287	
727447	963734	960	236287	
732365	1274539	35	542174	
738289	1379343	32	641054	
738724	1379787	32	641063	
741434	1224530	29	483096	
743373	1226447	33	483074	
766085	836678	26	70593	
787254	787269	116	15	Internal to JHP0709 (<i>amiA</i>)

Chromosome	Chromosome	Length of	Distance	Sequences
location of	location of	Repeat	between repeat	flanked by paired repeats
repeat 1	repeat 2	sequence, bp	sequences, bp	in recombination hotspots*
787254	787284	101	30	Internal to JHP0709 (<i>amiA</i>)
787254	787299	86	45	Internal to JHP0709 (<i>amiA</i>)
787254	787314	71	60	Internal to JHP0709 (<i>amiA</i>)
787254	787329	56	75	Internal to JHP0709 (<i>amiA</i>)
787254	787344	41	90	Internal to JHP0709 (<i>amiA</i>)
787254	787359	26	105	Internal to JHP0709 (<i>amiA</i>)
797396	797415	34	19	
807984	864872	30	56888	
808054	864942	77	56888	
808524	809226	36	702	
808710	808722	37	12	
808710	808734	25	24	
808953	1563215	24	754262	
808953	1563827	24	754874	
809302	865446	26	56144	
832674	834716	264	2042	3' region of JHP0753, JHP754-JHP756, and 5' region of JHP0757
832939	834981	83	2042	3' region of JHP0753, JHP754-JHP756, and 5' region of JHP0757
833032	835074	26	2042	3' region of JHP0753, JHP754-JHP756, and 5' region of JHP0757
833059	835101	53	2042	3' region of JHP0753, JHP754-JHP756, and 5' region of JHP0757
833113	835155	96	2042	3' region of JHP0753, JHP754-JHP756, and 5' region of JHP0757
863137	863155	26	18	
864678	864705	27	27	
892652	977639	26	84987	
893349	1157389	45	264040	
893935	1157976	269	264041	
893935	1159944	36	266009	
894205	1158246	26	264041	
911616	912237	33	621	

Chromosome	Chromosome	Length of	Distance	Sequences
location of	location of	Repeat	between repeat	flanked by paired repeats
repeat 1	repeat 2	sequence, bp	sequences, bp	in recombination hotspots*
912608	1296594	24	383986	
912608	1296610	24	384002	
912638	1296641	24	384003	
912643	1296660	31	384017	
912733	1296857	28	384124	
912793	1296918	890	384125	
912921	1224655	27	311734	
914905	1298916	24	384011	
916126	916261	31	135	Internal to JHP0834
916126	916396	31	270	Internal to JHP0834
916158	916293	60	135	Internal to JHP0834
916170	916439	77	269	5' region of JHP0834 and 3' region of JHP0835
916219	916354	84	135	Internal to JHP0834
916305	916439	48	134	5' region of JHP0834 and 3' region of JHP0835
916354	916488	28	134	5' region of JHP0834 and 3' region of JHP0835
924446	924539	29	93	
924449	924611	26	162	
924542	924611	79	69	
930683	930990	145	307	
930829	931136	47	307	
932716	934327	25	1611	
946587	946641	27	54	
956858	957325	467	467	
962739	1473876	31	511137	
985516	985528	38	12	
985516	985540	26	24	
1026424	1026439	89	15	Internal to JHP0928
1026424	1026454	74	30	Internal to JHP0928
1026424	1026469	59	45	Internal to JHP0928
1026424	1026484	44	60	Internal to JHP0928
1026424	1026499	29	75	Internal to JHP0928
1031674	1049499	35	17825	
1044359	1056646	24	12287	

Chromosome	Chromosome	Length of	Distance	Sequences
location of	location of	Repeat	between repeat	flanked by paired repeats
repeat 1	repeat 2	sequence, bp	sequences, bp	in recombination hotspots*
1048026	1048064	47	38	
1055201	1541529	44	486328	
1055246	1541574	63	486328	
1055342	1541670	30	486328	
1055440	1541768	64	486328	
1055507	1541835	44	486328	
1055645	1541973	38	486328	
1055685	1542013	40	486328	
1057086	1057108	24	22	
1057086	1426901	24	369815	
1057086	1426924	4051	369838	
1057086	1426946	24	369860	
1057088	1426888	29	369800	
1057092	1426915	25	369823	
1057107	1426900	25	369793	
1057107	1426923	25	369816	
1060964	1060981	36	17	JHP0951/JHP0952 intergenic region
1060964	1430819	36	369855	
1060981	1430802	36	369821	
1061078	1061086	67	8	5' region of JHP0952
1061078	1061094	59	16	5' region of JHP0952
1061078	1061102	51	24	5' region of JHP0952
1061078	1061110	43	32	5' region of JHP0952
1061078	1061118	35	40	5' region of JHP0952
1061078	1061126	27	48	5' region of JHP0952
1061078	1430924	51	369846	
1061078	1430932	43	369854	
1061078	1430940	35	369862	
1061078	1430948	27	369870	
1061086	1430916	59	369830	
1061094	1430916	74	369822	
1061102	1430916	51	369814	
1061110	1430916	43	369806	

Chromosome	Chromosome	Length of	Distance	Sequences
location of	location of	Repeat	between repeat	flanked by paired repeats
repeat 1	repeat 2	sequence, bp	sequences, bp	in recombination hotspots*
1061118	1430916	35	369798	
1061126	1430916	27	369790	
1061174	1430974	28	369800	
1061174	1430982	28	369808	
1061174	1430990	28	369816	
1061174	1430998	28	369824	
1061174	1431006	28	369832	
1061174	1431014	28	369840	
1061174	1431022	25	369848	
1061176	1430968	26	369792	
1061213	1431054	44	369841	
1061274	1431116	158	369842	
1061290	1061302	130	125'	region of JHP0953
1061290	1061314	118	245'	region of JHP0953
1061290	1061326	106	365'	region of JHP0953
1061290	1061338	94	485'	region of JHP0953
1061290	1061350	82	605'	region of JHP0953
1061290	1061362	70	725'	region of JHP0953
1061290	1061374	58	845'	region of JHP0953
1061290	1061386	46	965'	region of JHP0953
1061290	1061398	34	1085'	region of JHP0953
1061290	1431144	142	369854	
1061290	1431156	138	369866	
1061290	1431168	126	369878	
1061290	1431180	114	369890	
1061290	1431192	102	369902	
1061290	1431204	90	369914	
1061290	1431216	78	369926	
1061290	1431228	66	369938	
1061290	1431240	54	369950	
1061290	1431252	42	369962	
1061290	1431264	30	369974	
1061302	1431132	130	369830	

Chromosome	Chromosome	Length of	Distance	Sequences
location of	location of	Repeat	between repeat	flanked by paired repeats
repeat 1	repeat 2	sequence, bp	sequences, bp	in recombination hotspots*
1061314	1431132	118	369818	
1061326	1431132	106	369806	
1061338	1431132	94	369794	
1061350	1431132	82	369782	
1061362	1431132	70	369770	
1061374	1431132	58	369758	
1061386	1431132	46	369746	
1061398	1431132	34	369734	
1061466	1431318	80	369852	
1063911	1436342	886	372431	
1064940	1437384	30	372444	
1071212	1071221	35	9	
1071212	1071230	26	18	
1112076	1112097	67	21	
1112076	1112118	46	42	
1112076	1112139	25	63	
1143346	1577744	29	434398	
1143730	1145066	26	1336	3' region of JHP1031 and 5' region of JHP1032
1144103	1145439	27	1336	3' region of JHP1031 and 5' region of JHP1032
1144131	1145467	36	1336	3' region of JHP1031 and 5' region of JHP1032
1144168	1145504	453	1336	3' region of JHP1031 and 5' region of JHP1032
1144612	1145943	67	1331	JHP1032
1153029	1462523	25	309494	
1156268	1156334	47	66	
1157968	1159936	44	1968	
1187563	1462581	310	275018	
1187874	1462892	25	275018	
1187900	1462918	431	275018	
1188332	1463350	1693	275018	
1196645	1446299	29	249654	
1204491	1204500	24	9	
1224655	1297046	27	72391	
1238368	1238389	93	21	Internal to JHP1113

Chromosome	Chromosome	Length of	Distance	Sequences
location of	location of	Repeat	between repeat	flanked by paired repeats
repeat 1	repeat 2	sequence, bp	sequences, bp	in recombination hotspots*
1238368	1238410	72	42	Internal to JHP1113
1238368	1238431	51	63	Internal to JHP1113
1238368	1238452	30	84	Internal to JHP1113
1296449	1296702	24	253	Noncoding region upstream of JHP1164 (<i>babB</i>)
1296559	1296744	26	185	Noncoding region upstream of JHP1164 (<i>babB</i>)
1296593	1296609	39	16	Noncoding region upstream of JHP1164 (<i>babB</i>)
1296778	1296793	49	15	Noncoding region upstream of JHP1164 (<i>babB</i>)
1296778	1296808	34	30	Noncoding region upstream of JHP1164 (<i>babB</i>)
1299213	1299223	49	10	Noncoding region downstream of JHP1164 (<i>babB</i>)
1299213	1299233	39	20	Noncoding region downstream of JHP1164 (<i>babB</i>)
1299213	1299243	29	30	Noncoding region downstream of JHP1164 (<i>babB</i>)
1304751	1304763	80	12	Internal to JHP1171
1304751	1304775	68	24	Internal to JHP1171
1304751	1304787	56	36	Internal to JHP1171
1304751	1304799	44	48	Internal to JHP1171
1304751	1304811	32	60	Internal to JHP1171
1309687	1309702	24	15	
1360233	1360241	99	8	JHP1241/JHP1242 intergenic region
1360233	1360249	91	16	JHP1241/JHP1242 intergenic region
1360233	1360257	83	24	JHP1241/JHP1242 intergenic region
1360233	1360265	75	32	JHP1241/JHP1242 intergenic region
1360233	1360273	67	40	JHP1241/JHP1242 intergenic region
1360233	1360281	59	48	JHP1241/JHP1242 intergenic region
1360233	1360289	51	56	JHP1241/JHP1242 intergenic region
1360233	1360297	43	64	JHP1241/JHP1242 intergenic region
1360233	1360305	35	72	JHP1241/JHP1242 intergenic region
1360233	1360313	27	80	JHP1241/JHP1242 intergenic region
1388068	1390257	50	2189	
1393696	1393782	88	86	
1426888	1426926	29	38	JHP1299/JHP1300 intergenic region

Chromosome	Chromosome	Length of	Distance	Sequences
location of	location of	Repeat	between repeat	flanked by paired repeats
repeat 1	repeat 2	sequence, bp	sequences, bp	in recombination hotspots*
1426892	1426915	33	23	JHP1299/JHP1300 intergenic region
1426900	1426945	25	45	JHP1299/JHP1300 intergenic region
1426915	1426930	25	15	JHP1299/JHP1300 intergenic region
1426923	1426945	25	22	JHP1299/JHP1300 intergenic region
1430802	1430819	36	17	Noncoding region upstream of JHP1300
1430916	1430924	51	8	Internal to JHP1300
1430916	1430932	43	16	Internal to JHP1300
1430916	1430940	35	24	Internal to JHP1300
1430916	1430948	27	32	Internal to JHP1300
1430968	1430976	71	8	Internal to JHP1300
1430968	1430984	63	16	Internal to JHP1300
1430968	1430992	55	24	Internal to JHP1300
1430968	1431000	47	32	Internal to JHP1300
1430968	1431008	39	40	Internal to JHP1300
1430968	1431016	31	48	Internal to JHP1300
1431132	1431144	150	12	Internal to JHP1300
1431132	1431156	138	24	Internal to JHP1300
1431132	1431168	126	36	Internal to JHP1300
1431132	1431180	114	48	Internal to JHP1300
1431132	1431192	102	60	Internal to JHP1300
1431132	1431204	90	72	Internal to JHP1300
1431132	1431216	78	84	Internal to JHP1300
1431132	1431228	66	96	Internal to JHP1300
1431132	1431240	54	108	Internal to JHP1300
1431132	1431252	42	120	Internal to JHP1300
1431132	1431264	30	132	Internal to JHP1300
1449541	1450046	27	505	
1449581	1450084	25	503	
1455378	1455695	40	317	
1455378	1562663	25	107285	
1455404	1562689	32	107285	
1455469	1562753	107	107284	
1455577	1455898	27	321	

Chromosome	Chromosome	Length of	Distance	Sequences
location of	location of	Repeat	between repeat	flanked by paired repeats
repeat 1	repeat 2	sequence, bp	sequences, bp	in recombination hotspots*
1455577	1562861	35	107284	
1455693	1562661	27	106968	
1455893	1562856	32	106963	
1455926	1562889	28	106963	
1485503	1622989	25	137486	
1495781	1496381	24	600	
1542391	1543090	24	699	JHP1408/1409 intergenic regions
1542433	1543138	34	705	JHP1408/1409 intergenic regions
1542491	1543197	49	706	JHP1408/1409 intergenic regions
1542541	1543247	43	706	JHP1408/1409 intergenic regions
1542870	1543280	41	410	JHP1408/1409 intergenic regions
1562959	1563571	616	612	Internal to JHP1422 (<i>hsdS</i>)
1563020	1564244	45	1224	Internal to JHP1422 (<i>hsdS</i>)
1563494	1564724	31	1230	Internal to JHP1422 (<i>hsdS</i>)
1563632	1564244	45	612	Internal to JHP1422 (<i>hsdS</i>)
1564106	1564724	31	618	Internal to JHP1422 (<i>hsdS</i>)
1618927	1620142	26	1215	5' region of JHP1469 and 3' region of JHP1470
1618993	1620208	53	1215	5' region of JHP1469 and 3' region of JHP1470
1619086	1620301	53	1215	5' region of JHP1469 and 3' region of JHP1470
1619173	1620388	44	1215	5' region of JHP1469 and 3' region of JHP1470
1619283	1620498	60	1215	5' region of JHP1469 and 3' region of JHP1470
1619470	1620685	119	1215	5' region of JHP1469 and 3' region of JHP1470
1619755	1620964	46	1209	5' region of JHP1469 and 3' region of JHP1470
1640565	1643316	26	2751	JHP1493-1495
1641509	1643767	43	2258	JHP1493-1495
1641557	1641564	87	7	JHP1493/JHP1494 intergenic region
1641557	1641571	80	14	JHP1493/JHP1494 intergenic region
1641557	1641578	73	21	JHP1493/JHP1494 intergenic region
1641557	1641585	66	28	JHP1493/JHP1494 intergenic region
1641557	1641592	59	35	JHP1493/JHP1494 intergenic region
1641557	1641599	52	42	JHP1493/JHP1494 intergenic region
1641557	1641606	45	49	JHP1493/JHP1494 intergenic region
1641557	1641613	38	56	JHP1493/JHP1494 intergenic region

Chromosome	Chromosome	Length of	Distance	Sequences
location of	location of	Repeat	between repeat	flanked by paired repeats
repeat 1	repeat 2	sequence, bp	sequences, bp	in recombination hotspots*
1641557	1641620	31	63	JHP1493/JHP1494 intergenic region
1641557	1641627	24	70	JHP1493/JHP1494 intergenic region

Bold font indicates paired repeats fall within a recombination hotspot, defined a region $\leq 5,000$ bp containing ≥ 4 paired identical repeat sequences

* Gene designations obtained from the TIGR database (www.tigr.org)