

Supplemental Data

Phenotypically Concordant and Discordant

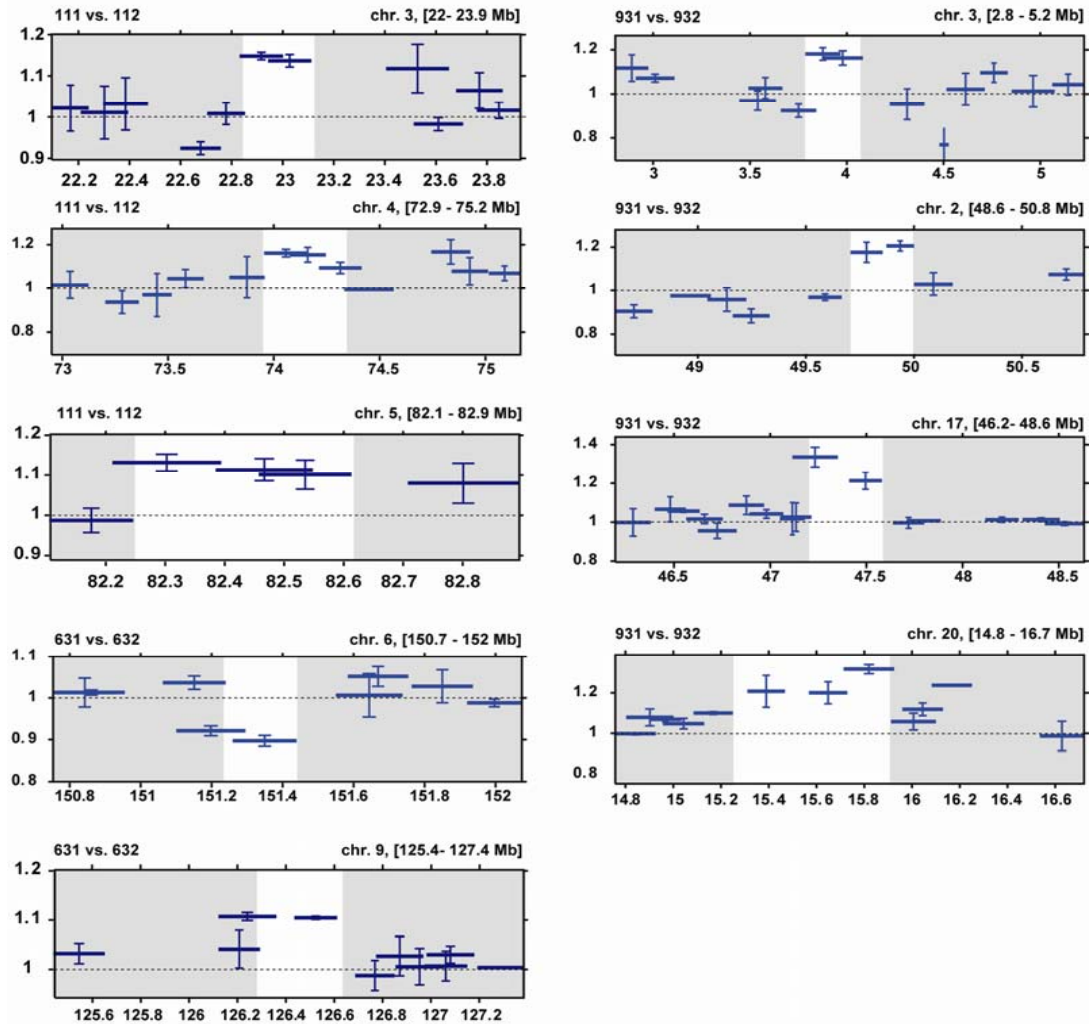
Monozygotic Twins Display Different

DNA Copy-Number-Variation Profiles

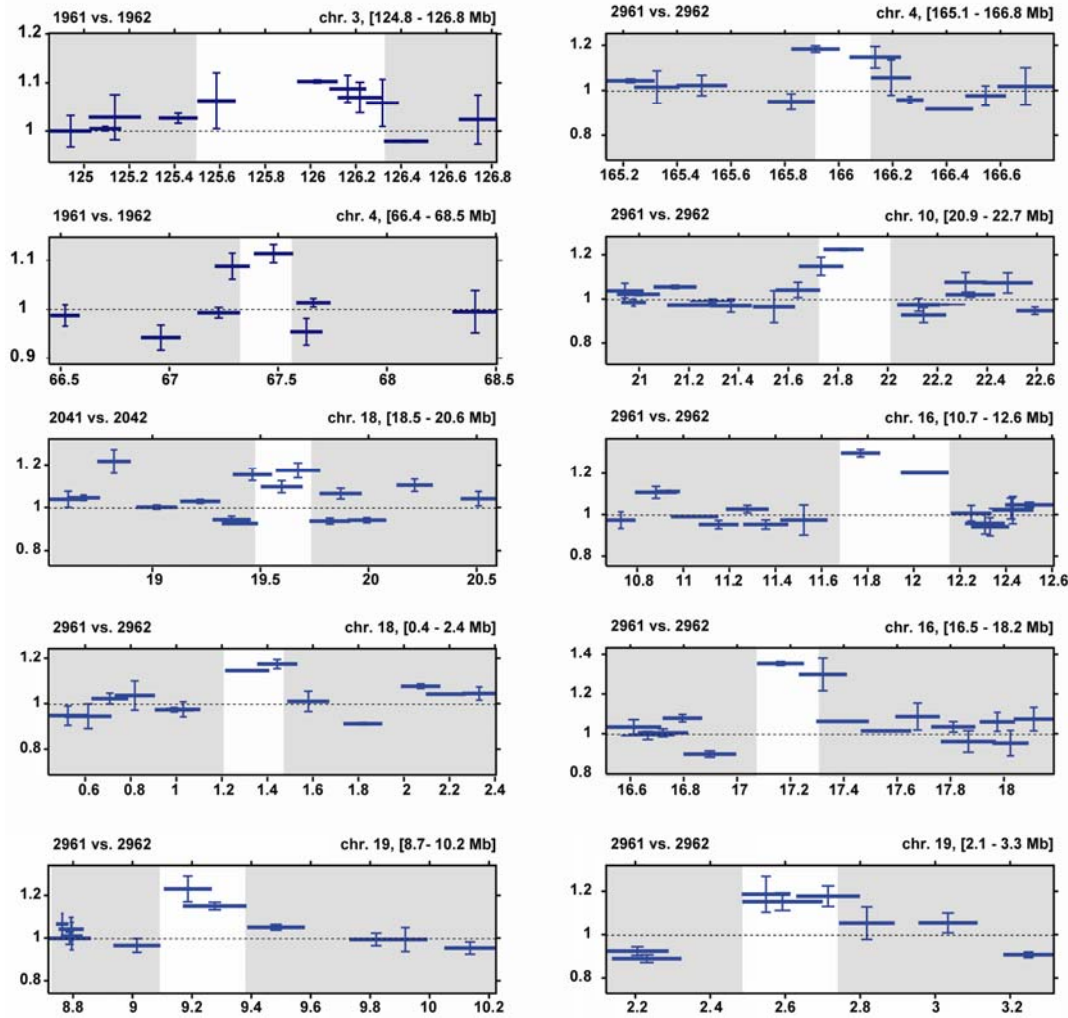
Carl E.G. Bruder, Arkadiusz Piotrowski, Antoinet A.C.J. Gijsbers, Robin Andersson, Stephen Erickson, Teresita Diaz de Ståhl, Uwe Menzel, Johanna Sandgren, Desiree von Tell, Andrzej Poplawski, Michael Crowley, Chiquito Crasto, E. Christopher Partridge, Hemant Tiwari, David B. Allison, Jan Komorowski, Gert-Jan B. van Ommen, Dorret I. Boomsma, Nancy L. Pedersen, Johan T. den Dunnen, Karin Wirdefeldt, and Jan P. Dumanski

Figures S1A and S1B. Additional CNVs Detected in STR Twins

S1A



S1B



Figures S1A and S1B. Additional CNVs Detected in STR Twins

Chromosomal regions deviating between the two twins in each twin pair, defined as having two or more overlapping clones differing by at least two global standard deviations from the average. The general layout is as in Figures 2A, 2C, 2E, 2G, and 2I.

Table S1. Clinical Summary of the Studied Twins

ID	Sex	SALT-Screening Result	PD in IDR	Diagnostic Workup	Clinical Diagnosis	Age of Onset, Sampling, Death	Methods Used in Analysis
111 ^(**)	F	unaffected	no	no	-	-, 73, -	32K
112 ^(**)	F	unaffected	yes	medical records	parkinsonism of unknown cause	70, 70, -	
291 ^(*)	M	unaffected	no	clinical exam	unaffected	-, 80, -	32K, ILL, HRA
292 ^(*)	M	self-reported PD	yes	medical records	possible PD, CLL ^(***)	68, 80, 81	
491 ^(*)	M	self-reported PD	yes	medical records	probable PD	39, 66, -	32K, ILL,
492 ^(*)	M	unaffected	no	clinical exam	unaffected	-, 68, -	
631 ^(**)	F	proxy-reported PD	no	medical records	lewy body dementia	79, 84, -	32K
632 ^(**)	F	unaffected	no	no	-	-, 80, 83	
701 ^(*)	F	unaffected	no	clinical exam	unaffected	-, 60, -	32K, ILL,
702 ^(*)	F	self-reported PD	yes	medical records	probable PD	47, 60, -	
931 ^(*)	F	self-reported PD	yes	medical records	probable PD	69, 80, -	32K
932 ^(*)	F	unaffected	no	clinical exam	essential tremor	71, 80, -	
1961 ^(**)	M	self-reported PD	no	medical records	parkinsonism of unknown cause	44, 82, -	32K
1962 ^(**)	M	unaffected	no	clinical exam	unaffected	-, 81, -	
2041 ^(*)	M	self-reported PD	yes	medical records	probable PD	74, 87, -	
2042 ^(*)	M	unaffected	yes	medical records	cerebrovascular parkinsonism and parkinsonism due to neuroleptics	83, 82, 84	32K
2961 ^(*)	M	unaffected	no	clinical exam	essential tremor	72, 72, -	32K
2962 ^(*)	M	self-reported PD	yes	medical records	probable PD	66, 71, -	
D7	F	-	-	-	-	-, 60, -	ILL, MCA, PYR
D8	F	-	-	-	-	-, 60, -	
11.1	M	-	-	-	-	-, 44, -	ILL
11.2	M	-	-	-	-	-, 44, -	
22.1	M	-	-	-	-	-, 41, -	ILL
22.2	M	-	-	-	-	-, 41, -	
36.1	F	-	-	-	-	-, 45, -	ILL

36.2	F	-	-	-	-	-	-, 45, -	
52.1	F	-	-	-	-	-	-, 42, -	ILL
52.2	F	-	-	-	-	-	-, 42, -	
94.1	F	-	-	-	-	-	-, 50, -	ILL
94.2	F	-	-	-	-	-	-, 50, -	
61.1	F	-	-	-	-	-	-, 41, -	ILL
61.2	F	-	-	-	-	-	-, 41, -	
71.1	F	-	-	-	-	-	-, 41, -	ILL
71.2	F	-	-	-	-	-	-, 41, -	
83.1	F	-	-	-	-	-	-, 37, -	ILL
83.2	F	-	-	-	-	-	-, 37, -	
85.1	F	-	-	-	-	-	-, 60, -	ILL
85.2	F	-	-	-	-	-	-, 60, -	

Abbreviations for methods used in analysis of CNVs are as follows: 32K—32K BAC array, HRA—high resolution array CGH based on repeat-free and nonredundant PCR fragments, ILL—Illumina HumanHap 300 Duo beadchip, MCA—Melting Curve Analysis, PYR—pyrosequencing.

Informed consent was obtained from all participants, and all procedures were approved by the Regional Ethical Review Board in Stockholm, by the Institutional Review Board of the University of Alabama at Birmingham, and by the Ethical Review Board of VU Medical Centre, Amsterdam.

Between 1998 and 2002, all twins 50 years or older (49,814 individuals) in the Swedish Twin Registry (STR) were contacted for a telephone interview in the SALT (Screening Across the Lifespan Twin) study¹. The interview included a checklist of common diseases, including Parkinson disease (PD). Twins with self-reported PD in the SALT study were worked up with a review of medical records and a telephone interview by a nurse, including detailed questions about symptom onset and manifestation of the disease. Twins with suspected PD by SALT were visited by a physician in their homes for a complete somatic examination and inventory of medical history. A number of co-twins were also visited. The examination was documented on video according to a standardized protocol. Diagnoses were assigned according to the National Institute of Neurological Disorders and Stroke (NIH-NINDS) diagnostic criteria for PD⁴ by the visiting physician and three movement-disorder specialists. Blood samples were collected from all twins with self-reported or suspected PD and their co-twins². The selection of the twin pairs included in the present study was performed based on the SALT telephone interview and information from the Swedish National Inpatient Discharge Register (IDR).

(*) indicates six twin pairs from the STR genotyped with 13 SNP markers, as reported previously⁵. These markers were as follows: rs11737074, rs16851009, rs17329669, rs2245218, rs2313982, rs7702187, rs7723605, rs7878232, rs7520966, ss46548856, rs10200894, rs1509269, and rs 682705. For quantification of the statistical significance of twin pairs being concordant at all loci, the probability of concordance assuming dizygosity was computed for each twin pair. This involved conditioning on the observed genotype of one of the twins. The probability is correctly understood as a p value of the test of the null hypothesis of dizygosity against the alternative hypothesis of monozygosity, and it coincides with the likelihood-ratio test of these hypotheses. On the basis of allele frequencies from 249 control subjects⁵, we computed for each of these six twin pairs the probability of being concordant at that number of unlinked loci, and (assuming dizygosity) in each pair the probability was less than 0.03.

(**) indicates three twin pairs from the STR genotyped with 18 SNP markers in the course of this study. These markers are as follows: rs4919683, rs6163, rs7096475, rs10046, rs1143704, rs12591359, rs7196161, rs9923231, rs2830, rs605059, rs1474040, rs4646316, rs6269, rs4818, rs1981429, rs2267866, rs2069832, rs7136446.

(***) Twin 292 was diagnosed with chronic lymphocytic leukemia (CLL) after SALT but prior to the clinical workup due to self-reported PD. This information was, however, not available to the authors prior to the initiation of the genetic analysis and findings of 11q and chromosome 4 rearrangements.

Supplemental References

1. Lichtenstein P, De Faire U, Floderus B, Svartengren M, Svedberg P, Pedersen NL (2002) The Swedish Twin Registry: A unique resource for clinical, epidemiological and genetic studies. *J Intern Med* 252:184-205
2. Wirdefeldt K, Gatz M, Bakaysa S, Fiske A, Flensburg M, Petzinger G, Widner H, Lew M, Welsh M, Pedersen N (2007) Complete ascertainment of Parkinson disease in the Swedish Twin Registry. *Neurobiology of Aging*, in press
3. Boomsma DI, de Geus EJ, Vink JM, Stubbe JH, Distel MA, Hottenga JJ, Posthuma D, van Beijsterveldt TC, Hudziak JJ, Bartels M, et al. (2006) Netherlands Twin Register: From twins to twin families. *Twin Res Hum Genet* 9:849-857
4. Gelb DJ, Oliver E, Gilman S (1999) Diagnostic criteria for Parkinson disease. *Arch Neurol* 56:33-39
5. Elbaz A, Nelson LM, Payami H, Ioannidis JP, Fiske BK, Annesi G, Carmine Belin A, Factor SA, Ferrarese C, Hadjigeorgiou GM, et al. (2006) Lack of replication of thirteen single-nucleotide polymorphisms implicated in Parkinson's disease: A large-scale international study. *Lancet Neurol* 5:917-923

Table S2. All Loci Differing at least Three Standard Deviations for STR Twins

2A	Reporter ID	Chromosome	Start Position	End Position	111 vs. 112	111 vs. 112 (DS)	Average	St. Dev.	p Value	Delta
	CTD-2041A17	1	145608108	145711199	1.260	1.252	1.256	0.005	0.000	0.256
	RP11-245D2	1	244684297	244838100	1.290	1.194	1.242	0.068	0.037	0.242
	RP11-583E5	3	38879920	39067037	1.237	1.357	1.297	0.085	0.038	0.297
	RP11-675B20	3	90297133	90495050	0.652	0.783	0.718	0.093	0.050	-0.282
	RP11-737D8	3	115099118	115270135	1.180	1.258	1.219	0.056	0.031	0.219
	RP11-686B21	3	173247654	173421131	1.197	1.305	1.251	0.076	0.043	0.251
	RP11-355D20	4	22342595	22518786	1.273	1.241	1.257	0.022	0.004	0.257
	RP11-752E15	4	68032252	68228328	1.284	1.190	1.237	0.066	0.037	0.237
	RP11-532P3	4	85601255	85766584	1.329	1.261	1.295	0.048	0.013	0.295
	RP11-509I10	4	115641491	115788986	1.187	1.272	1.230	0.060	0.033	0.230
	RP11-405A4	5	129810841	129871767	0.792	0.763	0.777	0.020	0.004	-0.223
	RP11-364P7	5	155941172	155995898	0.784	0.717	0.751	0.047	0.018	-0.249
	RP11-116E3	5	157865206	158027000	1.263	1.199	1.231	0.045	0.019	0.231
	RP13-501K8	10	5059805	5099716	0.753	0.659	0.706	0.067	0.025	-0.294
	RP11-316G14	14	50663553	50854435	1.320	1.229	1.275	0.064	0.026	0.275
	RP11-152F13	15	80481136	80694711	1.254	1.203	1.228	0.036	0.012	0.228
	RP11-192G9	16	20198620	20414323	1.238	1.200	1.219	0.026	0.007	0.219
	RP11-347C12	16	30117970	30286370	1.267	1.168	1.218	0.070	0.048	0.218
	RP11-228I5	16	52820799	53058588	1.264	1.174	1.219	0.063	0.039	0.219
	RP11-654J5	17	2938114	3154751	1.213	1.227	1.220	0.009	0.001	0.220
	RP11-443O21	17	60135129	60336318	1.240	1.264	1.252	0.017	0.002	0.252
	RP11-726I22	19	12150103	12290532	1.225	1.280	1.252	0.039	0.012	0.252
	RP11-460G17	19	23846151	24003299	1.305	1.388	1.346	0.059	0.014	0.346
	CTD-2532O10	19	43526639	43715887	1.195	1.311	1.253	0.082	0.049	0.253
	CTD-2522F24	22	17308437	17440893	0.759	0.661	0.710	0.069	0.027	-0.290
	RP11-376B14	22	18395963	18584158	0.797	0.729	0.763	0.048	0.020	-0.237
	RP11-715O21	22	34428199	34610897	0.816	0.711	0.763	0.075	0.046	-0.237
	RP11-144C10	X	13218072	13385415	0.781	0.774	0.777	0.005	0.000	-0.223
	RP11-603H24	X	52486473	52679474	1.239	1.203	1.221	0.025	0.006	0.221
	RP11-248O15	X	73228809	73372995	1.171	1.270	1.221	0.070	0.047	0.221
	RP11-80I2	X	87860653	88005853	0.761	0.636	0.699	0.088	0.040	-0.301
	RP11-217E15	X	134987225	135149248	0.791	0.758	0.775	0.023	0.005	-0.225
	RP11-439D19	X	136670771	136884862	1.345	1.257	1.301	0.062	0.020	0.301
	RP11-66O13	X	153388726	153570995	0.820	0.727	0.774	0.066	0.040	-0.226

2B

Reporter ID	Chromosome	Start Position	End Position	291 vs. 292	291 vs. 292 (DS)	Average	St. Dev.	p Value	Delta
RP11-813F19	2	181249647	181459102	0.849	0.884	0.867	0.025	0.017	-0.133
RP11-81E16	3	62606583	62798807	1.157	1.135	1.146	0.015	0.005	0.146
RP11-601H5	3	75904342	76033860	0.806	0.868	0.837	0.044	0.034	-0.163
RP11-557B13	3	90369344	90571847	0.842	0.898	0.870	0.040	0.043	-0.130
RP11-339A16	3	162317339	162502173	1.113	1.157	1.135	0.031	0.026	0.135
CTD-2023L13	4	18736543	18892292	0.902	0.849	0.875	0.037	0.041	-0.125
RP11-260B15	4	37202526	37382571	1.130	1.122	1.126	0.006	0.001	0.126
RP11-626H2	4	44573131	44756701	0.841	0.887	0.864	0.033	0.028	-0.136
RP11-476P11	5	85684178	85813902	0.883	0.860	0.871	0.016	0.008	-0.129
RP11-776P10	6	86093507	86291702	1.142	1.162	1.152	0.014	0.004	0.152
RP11-637P12	6	137600455	137818246	1.138	1.150	1.144	0.008	0.002	0.144
RP11-719L6	8	5083904	5254357	0.856	0.868	0.862	0.009	0.002	-0.138
RP11-211E19	9	68137546	68273938	1.150	1.184	1.167	0.024	0.010	0.167
RP11-97A7	9	98737456	98914657	1.128	1.124	1.126	0.003	0.000	0.126
RP11-474D4	11	32521613	32658675	1.151	1.121	1.136	0.021	0.012	0.136
RP11-767K7	11	45370971	45554004	1.143	1.183	1.163	0.029	0.015	0.163
RP11-31E14	11	106116314	106270764	0.861	0.850	0.856	0.008	0.002	-0.144
RP11-271B22	12	60907855	61051759	1.156	1.106	1.131	0.036	0.035	0.131
RP11-191O21	13	80283719	80471707	0.872	0.872	0.872	0.000	0.000	-0.128
RP11-350A1	15	21805449	21990643	0.878	0.840	0.859	0.027	0.018	-0.141
RP11-727P13	15	24852287	25063045	0.871	0.839	0.855	0.022	0.012	-0.145
RP11-386I20	X	10246348	10422800	1.151	1.121	1.136	0.021	0.012	0.136
RP11-294J19	X	24994230	25142637	1.131	1.120	1.125	0.008	0.002	0.125
RP11-368D24	X	64548039	64764651	0.877	0.860	0.869	0.012	0.004	-0.131
RP11-349K4	X	66355278	66508041	0.844	0.899	0.871	0.039	0.044	-0.129
RP11-339M12	X	90951069	91146611	1.127	1.169	1.148	0.029	0.019	0.148
RP11-299H1	X	134431493	134633543	1.118	1.139	1.129	0.015	0.006	0.129
RP11-469P18	X	140319722	140501009	0.848	0.847	0.847	0.001	0.000	-0.153
RP11-739J8	Y	2343881	2563175	1.110	1.172	1.141	0.044	0.046	0.141
RP11-339O3	Y	8569061	8754916	1.162	1.174	1.168	0.009	0.001	0.168
RP11-680H1	Y	17515433	17693950	0.900	0.851	0.875	0.034	0.036	-0.125
RP11-400I17	Y	22316000	22490258	1.130	1.175	1.153	0.032	0.022	0.153
RP11-724A10	Y	22619177	22814815	1.137	1.148	1.142	0.008	0.002	0.142

2C

Reporter ID	Chromosome	Start Position	End Position	491 vs. 492	491 vs. 492 (DS)	Average	St. Dev.	p Value	Delta
RP11-297N6	1	75758241	75939531	1.175	1.133	1.154	0.030	0.018	0.154
RP11-504K20	1	143512932	143554982	1.153	1.203	1.178	0.035	0.019	0.178
RP11-426N8	2	57595300	57825549	1.171	1.151	1.161	0.014	0.004	0.161
RP11-281E9	2	63349507	63523361	1.124	1.184	1.154	0.042	0.036	0.154
RP11-347D8	2	81719808	81923990	1.164	1.150	1.157	0.010	0.002	0.157
RP13-491C14	2	89877961	90008324	1.144	1.169	1.156	0.018	0.006	0.156
RP11-134N21	2	94748045	94916895	1.175	1.176	1.175	0.001	0.000	0.175
RP11-316D6	3	23405015	23651161	1.138	1.168	1.153	0.021	0.009	0.153
RP11-630P6	3	111786982	111950555	1.181	1.133	1.157	0.034	0.022	0.157
RP11-791E6	3	157467042	157625115	0.840	0.837	0.839	0.002	0.000	-0.161
RP11-555D7	4	52860451	52881034	1.182	1.153	1.168	0.020	0.007	0.168
RP11-571C13	4	64000615	64179471	0.824	0.799	0.812	0.018	0.005	-0.188
RP11-384L4	4	117455247	117629834	1.174	1.179	1.177	0.004	0.000	0.177
RP11-81C20	4	130489294	130675520	0.866	0.804	0.835	0.044	0.034	-0.165
CTD-2130D24	5	68274044	68318437	1.208	1.228	1.218	0.014	0.002	0.218
RP11-789L17	5	136049979	136213667	1.183	1.138	1.161	0.032	0.019	0.161
RP11-65N19	6	135371201	135542053	1.202	1.161	1.182	0.029	0.013	0.182
RP11-445O1	7	21395516	21602192	1.176	1.148	1.162	0.020	0.007	0.162
RP11-576G4	7	71403999	71559889	1.129	1.179	1.154	0.036	0.026	0.154
RP11-588I9	7	122473376	122666511	1.157	1.189	1.173	0.022	0.008	0.173
RP11-108H23	7	132752166	132919188	1.143	1.214	1.179	0.050	0.037	0.179
RP11-777I13	9	31530079	31708113	1.180	1.159	1.170	0.015	0.004	0.170
RP13-501K8	10	5059805	5099716	1.168	1.157	1.162	0.008	0.001	0.162
RP11-338F14	10	62026515	62228545	1.144	1.198	1.171	0.038	0.024	0.171
RP11-182E22	11	74445	146316	1.169	1.179	1.174	0.007	0.001	0.174
RP11-540D7	11	9834836	9999656	1.190	1.143	1.166	0.034	0.020	0.166
RP11-116P9	11	55995413	56168647	1.176	1.128	1.152	0.034	0.024	0.152
RP11-442E5	11	62699737	62735532	1.202	1.143	1.173	0.042	0.029	0.173
RP11-21A7	11	63572697	63756938	1.173	1.172	1.173	0.001	0.000	0.173
RP11-166B12	12	24160883	24340843	0.834	0.848	0.841	0.010	0.002	-0.159
RP11-680O10	12	48006546	48197129	1.241	1.167	1.204	0.052	0.031	0.204
RP11-632N18	13	57291550	57496259	1.132	1.175	1.154	0.030	0.019	0.154
RP11-92G19	18	4926280	5083813	1.141	1.174	1.158	0.024	0.011	0.158
CTD-2575I15	19	24061049	24216635	1.210	1.157	1.184	0.038	0.021	0.184
RP11-473K4	20	4474607	4655064	1.215	1.272	1.243	0.040	0.013	0.243
RP11-631K10	X	76575103	76731320	1.167	1.144	1.155	0.016	0.006	0.155

RP11-735C15	X	121201727	121409425	1.145	1.163	1.154	0.013	0.003	0.154
RP11-352M22	X	133654337	133808247	0.855	0.786	0.821	0.049	0.035	-0.179
RP11-125B2	Y	13197007	13359423	1.156	1.163	1.160	0.005	0.000	0.160
RP11-446M21	Y	15017973	15232354	1.192	1.145	1.169	0.033	0.019	0.169
RP11-292E8	Y	15371331	15545442	1.159	1.221	1.190	0.044	0.026	0.190
RP11-5I7	Y	20818713	20992479	1.161	1.181	1.171	0.014	0.003	0.171

2D

Reporter ID	Chromosome	Start Position	End Position	631 vs. 632	631 vs. 632 (DS)	Average	St. Dev.	p Value	Delta
RP11-776O18	1	357737	465038	1.239	1.163	1.201	0.053	0.033	0.201
RP11-45C18	1	579118	696613	1.187	1.166	1.177	0.015	0.004	0.177
RP11-805D13	1	61973164	62147845	1.120	1.118	1.119	0.001	0.000	0.119
RP11-502D11	5	35898841	36053805	0.889	0.869	0.879	0.014	0.006	-0.121
RP11-742F23	5	53205455	53377365	1.135	1.104	1.120	0.022	0.016	0.120
RP11-589F5	5	69009833	69253741	1.107	1.146	1.127	0.027	0.022	0.127
RP11-622L8	5	104788131	104972186	0.811	0.813	0.812	0.001	0.000	-0.188
RP11-782E17	5	164788790	164968373	0.892	0.835	0.863	0.040	0.041	-0.137
RP11-605G12	5	168511570	168743232	0.894	0.862	0.878	0.023	0.017	-0.122
RP11-94O5	5	169917296	170076134	0.866	0.897	0.881	0.022	0.016	-0.119
RP11-113O5	6	146597947	146749146	0.882	0.877	0.880	0.004	0.001	-0.120
RP11-585N9	7	34286135	34465379	0.849	0.888	0.869	0.028	0.021	-0.131
RP11-367N11	7	71963826	72164463	1.198	1.125	1.162	0.052	0.049	0.162
CTD-2214A18	7	123769555	123935715	0.878	0.838	0.858	0.028	0.019	-0.142
RP11-564O4	7	146958966	147139262	1.138	1.139	1.139	0.001	0.000	0.139
RP11-749O22	7	148499421	148690806	1.145	1.151	1.148	0.005	0.001	0.148
RP11-490F3	9	93827851	93976700	0.848	0.877	0.862	0.020	0.011	-0.138
RP11-790I8	10	6425006	6616482	1.141	1.100	1.121	0.029	0.028	0.121
RP11-333K5	10	6986220	7175535	1.125	1.124	1.124	0.001	0.000	0.124
RP11-353M9	10	13787197	13938899	1.138	1.145	1.141	0.005	0.001	0.141
RP11-2B21	10	46530277	46691281	0.859	0.893	0.876	0.024	0.018	-0.124
RP11-205L9	11	7489184	7670516	0.864	0.889	0.876	0.018	0.010	-0.124
RP11-195I23	11	44985558	45145067	1.153	1.172	1.163	0.013	0.003	0.163
RP11-702F22	11	61958181	62121404	1.151	1.114	1.132	0.026	0.019	0.132
RP11-692F22	11	65388905	65562696	1.121	1.177	1.149	0.040	0.034	0.149
RP11-796J22	11	125473184	125648000	1.143	1.131	1.137	0.009	0.002	0.137
RP11-753B7	12	127865203	128054909	1.149	1.132	1.141	0.012	0.004	0.141
CTD-2012N23	13	73743445	73915995	0.907	0.855	0.881	0.037	0.046	-0.119
CTD-2547L19	16	63673283	63840856	1.172	1.114	1.143	0.041	0.040	0.143
RP11-297J24	18	5940253	6141117	1.124	1.135	1.130	0.008	0.002	0.130
RP11-579D4	19	2122188	2186549	1.140	1.191	1.165	0.036	0.023	0.165
RP11-639H4	20	13568703	13738538	1.109	1.128	1.119	0.013	0.006	0.119
RP11-567A7	X	143024019	143215767	0.832	0.878	0.855	0.033	0.025	-0.145

2E

Reporter ID	Chromosome	Start Position	End Position	701 vs. 702	701 vs. 702 (DS)	Average	St. Dev.	p Value	Delta
RP11-746P17	1	64226397	64413225	0.806	0.803	0.805	0.002	0.000	-0.195
RP11-310L14	1	145916221	146007150	1.169	1.221	1.195	0.036	0.017	0.195
RP11-318A19	2	41333125	41485129	1.253	1.172	1.212	0.057	0.034	0.212
RP11-109D7	2	76941621	77104437	1.204	1.228	1.216	0.017	0.003	0.216
RP13-573F8	2	91665800	91688035	1.189	1.195	1.192	0.005	0.000	0.192
RP11-27C4	2	125450151	125623681	1.198	1.181	1.189	0.012	0.002	0.189
RP11-279F4	2	162499760	162659596	1.210	1.178	1.194	0.023	0.007	0.194
RP11-609I2	2	167579737	167621367	1.283	1.219	1.251	0.045	0.016	0.251
RP11-541F21	2	212320547	212509667	1.167	1.189	1.178	0.016	0.004	0.178
RP11-535I5	3	88983919	89188056	1.244	1.163	1.204	0.058	0.038	0.204
RP11-557B13	3	90369344	90571847	1.204	1.289	1.247	0.060	0.028	0.247
RP11-517N5	3	103643599	103828216	0.816	0.806	0.811	0.007	0.001	-0.189
RP11-307B9	3	113135941	113329807	1.191	1.188	1.189	0.002	0.000	0.189
RP11-263M5	3	119688051	119860700	1.273	1.221	1.247	0.037	0.011	0.247
RP11-60C5	3	131171413	131347372	1.195	1.243	1.219	0.034	0.012	0.219
RP11-765D10	3	193465284	193661962	1.208	1.212	1.210	0.003	0.000	0.210
RP11-675F3	4	101334416	101385098	1.279	1.229	1.254	0.035	0.009	0.254
RP11-732F16	4	105956170	106146297	1.187	1.247	1.217	0.042	0.019	0.217
RP11-75A5	4	165823883	166003589	1.207	1.165	1.186	0.030	0.013	0.186
CTD-2130D24	5	68274044	68318437	1.242	1.219	1.230	0.016	0.002	0.230
RP11-3C20	5	84457438	84485133	1.178	1.270	1.224	0.065	0.040	0.224
RP11-400E17	6	44181614	44317825	1.286	1.247	1.267	0.028	0.005	0.267
RP11-379D10	7	75164883	75317803	1.162	1.196	1.179	0.024	0.009	0.179
RP13-574H12	8	86851015	86924714	1.378	1.420	1.399	0.030	0.003	0.399
RP11-374L5	8	88528197	88740644	1.190	1.209	1.200	0.014	0.002	0.200
RP11-380P16	9	21201965	21392469	1.185	1.228	1.206	0.030	0.010	0.206
RP11-218K21	10	45037616	45088880	1.222	1.282	1.252	0.043	0.014	0.252
RP11-709J10	10	66355758	66558763	1.151	1.210	1.181	0.041	0.025	0.181
RP11-188N23	10	102120730	102272739	1.220	1.168	1.194	0.037	0.017	0.194
RP11-138A7	11	55631471	55798134	1.167	1.210	1.189	0.030	0.012	0.189
RP11-116P9	11	55995413	56168647	1.202	1.207	1.204	0.004	0.000	0.204
RP11-663M14	12	36669603	36771889	1.233	1.213	1.223	0.014	0.002	0.223
RP11-726E10	13	64177869	64356550	1.151	1.209	1.180	0.041	0.026	0.180
RP11-608C4	13	81471639	81640783	1.148	1.228	1.188	0.057	0.043	0.188
RP11-607H20	15	18276592	18476403	1.175	1.223	1.199	0.034	0.014	0.199
RP11-451F21	15	38619837	38782403	1.193	1.242	1.217	0.034	0.012	0.217

AJHG, Volume 82

CTD-2185P12	19	32474893	32602112	1.206	1.242	1.224	0.026	0.007	0.224
RP11-290B13	X	33090657	33250347	1.171	1.197	1.184	0.019	0.005	0.184
RP11-397G18 *	X	61518203	61693205	1.300	1.275	1.288	0.018	0.002	0.288
RP11-807G23 *	X	61679541	61700538	1.266	1.264	1.265	0.002	0.000	0.265
RP11-627J4	X	76156942	76345547	1.215	1.278	1.246	0.044	0.016	0.246
RP11-2L17	X	78752984	78915543	1.226	1.167	1.197	0.041	0.021	0.197
RP11-374E4	X	82220123	82371175	1.182	1.186	1.184	0.003	0.000	0.184
RP11-131B17 *	X	142222466	142370040	0.771	0.774	0.773	0.003	0.000	-0.227
RP11-346M2 *	X	142237191	142411541	0.776	0.774	0.775	0.001	0.000	-0.225
RP11-59L18	Y	6922456	7103763	1.282	1.229	1.255	0.037	0.010	0.255
RP11-119M24	Y	14058290	14233976	1.176	1.252	1.214	0.054	0.030	0.214
RP11-391J10 *	Y	14408412	14602774	1.172	1.196	1.184	0.017	0.004	0.184
RP11-62G8 *	Y	14690725	14835942	1.171	1.191	1.181	0.014	0.003	0.181
RP11-151A7 *	Y	15069408	15209724	1.206	1.173	1.189	0.023	0.007	0.189
RP11-565O24 *	Y	15175284	15387680	1.162	1.189	1.175	0.020	0.006	0.175
RP11-166O18	Y	17425354	17546324	1.151	1.227	1.189	0.054	0.039	0.189
RP11-5N3	Y	19545860	19697203	1.208	1.223	1.216	0.010	0.001	0.216
RP11-5I7	Y	20818713	20992479	1.173	1.211	1.192	0.027	0.010	0.192
RP11-750J23	Y	21225536	21419175	1.243	1.193	1.218	0.036	0.013	0.218

2F

Reporter ID	Chromosome	Start Position	End Position	931 vs. 932	931 vs. 932 (DS)	Average	St. Dev.	p Value	Delta
RP11-829B14	1	10976097	11169684	1.314	1.253	1.283	0.043	0.011	0.283
CTD-2022C17	1	87266644	87358110	1.340	1.391	1.365	0.036	0.005	0.365
CTD-2315G12	1	105064153	105146049	1.283	1.303	1.293	0.014	0.001	0.293
RP11-35H13	1	112931143	113114559	1.396	1.262	1.329	0.095	0.039	0.329
RP11-420N23	1	145641733	145705858	1.291	1.213	1.252	0.055	0.023	0.252
RP11-367J7	1	154376465	154589154	0.738	0.761	0.750	0.016	0.002	-0.250
RP11-361M9	1	160197646	160403993	0.711	0.733	0.722	0.016	0.002	-0.278
CTD-2063G5	1	223911142	224062615	1.216	1.284	1.250	0.048	0.018	0.250
RP11-464N3	1	232521388	232717181	0.661	0.734	0.698	0.052	0.014	-0.302
RP11-478B8	2	16618896	16666457	0.736	0.687	0.711	0.035	0.007	-0.289
RP11-131B7	2	29131911	29308847	1.357	1.263	1.310	0.066	0.022	0.310
CTD-2010E9	2	36561281	36728336	1.323	1.384	1.354	0.043	0.007	0.354
RP11-108K19	2	70636107	70793434	1.341	1.278	1.310	0.044	0.010	0.310
RP11-809K2	2	73257718	73467161	1.288	1.285	1.286	0.002	0.000	0.286
RP11-215G3	2	85414971	85592359	1.246	1.243	1.244	0.003	0.000	0.244
CTD-2007A8	2	87817123	87904574	0.712	0.707	0.709	0.004	0.000	-0.291
RP11-489N8	2	105080396	105246097	1.203	1.284	1.244	0.057	0.026	0.244
RP11-639M19	2	117979871	118033599	0.690	0.796	0.743	0.075	0.040	-0.257
RP11-731N3	2	124453575	124660471	1.320	1.297	1.308	0.016	0.001	0.308
RP11-725P16	2	132789218	132976259	1.247	1.346	1.296	0.070	0.027	0.296
RP11-112L20	2	139084530	139256869	1.346	1.254	1.300	0.064	0.022	0.300
RP11-280B22	2	161047733	161214257	1.310	1.242	1.276	0.048	0.015	0.276
RP11-760C21	2	166482404	166677169	1.402	1.439	1.421	0.026	0.002	0.421
RP11-736I20	2	176476152	176649164	1.282	1.215	1.248	0.047	0.018	0.248
RP11-129D2	2	218589554	218749188	1.341	1.225	1.283	0.082	0.039	0.283
CTD-2253O7	2	221396934	221462562	0.732	0.716	0.724	0.012	0.001	-0.276
RP11-467A18	2	225842334	226046489	1.447	1.378	1.412	0.049	0.007	0.412
RP11-271M11	2	228935706	229085436	1.280	1.272	1.276	0.006	0.000	0.276
RP11-625I9	3	21587287	21738891	1.455	1.392	1.423	0.045	0.006	0.423
RP11-795J19	3	64187739	64367902	0.762	0.622	0.692	0.099	0.048	-0.308
RP11-135M5	3	71263593	71454732	1.288	1.300	1.294	0.009	0.000	0.294
RP11-168E23	3	79572253	79777939	1.295	1.301	1.298	0.004	0.000	0.298
RP11-695G6	3	79937843	80130847	1.330	1.355	1.342	0.018	0.001	0.342
RP11-734G18	3	96185464	96367298	1.267	1.247	1.257	0.014	0.001	0.257
RP11-753G1	3	109489098	109662031	1.393	1.414	1.404	0.015	0.001	0.404
RP11-60C5	3	131171413	131347372	0.621	0.722	0.672	0.071	0.023	-0.328

AJHG, Volume 82

RP11-709D19	3	136891837	137086336	1.306	1.282	1.294	0.016	0.002	0.294
RP11-454E1	3	138377734	138557659	1.239	1.290	1.264	0.037	0.009	0.264
RP11-454K23	3	143154651	143390336	1.244	1.251	1.248	0.004	0.000	0.248
RP11-47K4	3	148893168	149101109	1.417	1.396	1.407	0.015	0.001	0.407
RP11-151F4	3	154827008	154971978	1.241	1.249	1.245	0.006	0.000	0.245
RP11-555M1	3	158294238	158503253	1.419	1.282	1.351	0.097	0.036	0.351
RP11-238O15	4	9110856	9287922	1.375	1.326	1.351	0.035	0.005	0.351
RP11-281P23	4	11082619	11230794	1.339	1.263	1.301	0.054	0.016	0.301
RP11-346A10	4	22636599	22847066	1.318	1.323	1.320	0.004	0.000	0.320
RP11-368O20	4	32085807	32286076	1.255	1.276	1.265	0.015	0.002	0.265
RP11-117E8	4	54808801	54986197	1.419	1.403	1.411	0.012	0.000	0.411
RP11-795O2	4	64283007	64479355	1.298	1.216	1.257	0.058	0.025	0.257
RP11-640L19	4	75344846	75517408	1.350	1.247	1.298	0.073	0.029	0.298
RP11-767B3	4	137464465	137650538	1.291	1.248	1.269	0.030	0.006	0.269
RP11-117D6	4	159969920	160127117	1.300	1.249	1.274	0.036	0.009	0.274
RP11-433E11	4	180934719	181093787	1.268	1.366	1.317	0.069	0.023	0.317
RP11-10A20	5	12610588	12790470	1.345	1.287	1.316	0.041	0.008	0.316
RP11-642E3	5	39267853	39337394	0.747	0.766	0.757	0.013	0.002	-0.243
RP11-597A9	5	55322014	55502861	1.315	1.374	1.344	0.041	0.007	0.344
RP11-567A12	5	117310662	117475956	1.325	1.218	1.271	0.076	0.037	0.271
RP11-508O6	5	124415191	124578155	1.278	1.265	1.271	0.009	0.001	0.271
RP11-368F9	5	126082168	126145619	0.684	0.676	0.680	0.006	0.000	-0.320
RP11-481K6	5	137239525	137402473	1.237	1.332	1.285	0.067	0.027	0.285
RP11-13I13	6	121274917	121443439	0.693	0.789	0.741	0.068	0.033	-0.259
CTD-2260H18	7	92197467	92346033	1.333	1.241	1.287	0.065	0.025	0.287
RP11-289F17	7	137365966	137542971	1.288	1.287	1.287	0.001	0.000	0.287
RP11-728K20	7	149020484	149169295	1.302	1.260	1.281	0.030	0.006	0.281
RP11-730E9	8	120604328	120816722	1.301	1.252	1.276	0.034	0.008	0.276
RP11-683C9	9	43809946	43901276	1.199	1.310	1.254	0.078	0.044	0.254
RP11-509M10	10	42009772	42104807	0.637	0.697	0.667	0.042	0.008	-0.333
RP11-147M9	11	30310028	30461033	1.252	1.256	1.254	0.003	0.000	0.254
RP11-568I10	11	129399398	129426193	1.317	1.254	1.285	0.045	0.012	0.285
CTD-2165P12	12	23782882	23877346	1.423	1.392	1.407	0.022	0.001	0.407
RP11-410H14	12	27444118	27483233	0.784	0.667	0.725	0.082	0.042	-0.275
RP11-8P13	12	32781795	32936803	1.340	1.222	1.281	0.083	0.041	0.281
CTD-2165G10	12	40631808	40751772	1.265	1.357	1.311	0.065	0.021	0.311
RP11-677P12	12	45813066	45983115	1.239	1.277	1.258	0.027	0.005	0.258
CTD-2013M19	12	51070257	51225503	1.371	1.295	1.333	0.053	0.013	0.333
RP11-58M19	13	28785074	28945002	0.677	0.798	0.738	0.085	0.049	-0.262

AJHG, Volume 82

RP11-605G21	14	20070736	20280137	1.305	1.205	1.255	0.071	0.036	0.255
RP11-779N21	14	54018262	54177573	0.752	0.756	0.754	0.002	0.000	-0.246
RP11-784I21	14	63135164	63300699	1.320	1.253	1.286	0.047	0.013	0.286
RP11-697O3	16	11683993	11853930	1.381	1.376	1.379	0.004	0.000	0.379
RP11-594K6	16	20128348	20321450	1.223	1.288	1.256	0.046	0.016	0.256
RP11-683E7	16	21349224	21557244	1.274	1.216	1.245	0.041	0.013	0.245
RP11-295B6	16	32058398	32226040	1.288	1.204	1.246	0.060	0.028	0.246
RP11-332G8	16	56903555	57127218	1.354	1.260	1.307	0.066	0.023	0.307
RP11-345K17	16	76833375	77078060	1.307	1.203	1.255	0.074	0.039	0.255
RP11-594G15	16	77991906	78178406	1.326	1.448	1.387	0.086	0.024	0.387
RP11-723B3	17	4496300	4710353	0.758	0.692	0.725	0.046	0.014	-0.275
RP11-773B2	17	15852738	16045240	1.323	1.205	1.264	0.083	0.046	0.264
RP11-610D13	17	34003220	34231045	1.283	1.230	1.257	0.037	0.010	0.257
RP11-653N8	17	47115085	47351437	1.372	1.300	1.336	0.051	0.011	0.336
RP11-590C7	17	64035625	64216789	1.273	1.240	1.256	0.023	0.004	0.256
RP11-202G12	17	64765787	64959422	1.202	1.288	1.245	0.061	0.029	0.245
RP11-775A4	17	67882240	68059278	1.303	1.246	1.275	0.040	0.010	0.275
RP11-540C19	17	73183443	73381889	1.256	1.295	1.276	0.028	0.005	0.276
RP13-586J16	17	73686884	73819286	1.268	1.222	1.245	0.032	0.009	0.245
CTD-2594A10	18	14379514	14568696	1.445	1.325	1.385	0.085	0.023	0.385
RP11-814I23	18	45570558	45750720	1.302	1.300	1.301	0.002	0.000	0.301
RP11-75H6	19	902641	1095485	1.346	1.247	1.296	0.070	0.027	0.296
RP11-268O21 *	19	2928774	3109041	1.346	1.335	1.341	0.008	0.000	0.341
CTD-2523G7 *	19	3049189	3290113	1.284	1.253	1.269	0.022	0.003	0.269
RP11-14H8 *	19	8743145	8784792	1.206	1.286	1.246	0.057	0.026	0.246
RP11-711A2 *	19	8860000	9060080	1.235	1.297	1.266	0.044	0.013	0.266
RP11-40M14	19	13172735	13333342	1.282	1.284	1.283	0.002	0.000	0.283
RP11-109F17	19	33018635	33176500	1.243	1.271	1.257	0.019	0.003	0.257
RP11-593H12	19	33512105	33687076	1.277	1.305	1.291	0.020	0.002	0.291
RP11-276F19	19	33854271	34018080	1.245	1.279	1.262	0.024	0.004	0.262
CTD-2346H11	19	44120293	44248642	1.277	1.256	1.266	0.015	0.002	0.266
RP11-344A8	19	57319094	57509253	1.322	1.235	1.279	0.062	0.024	0.279
RP11-73M20	19	58546167	58716050	1.336	1.227	1.281	0.077	0.035	0.281
RP11-812P6	19	59146595	59312515	1.374	1.407	1.390	0.023	0.002	0.390
RP11-764N9	19	62484597	62665515	1.388	1.299	1.343	0.063	0.017	0.343
RP11-667O16	19	63465828	63637003	1.273	1.223	1.248	0.036	0.010	0.248
RP11-22E15	20	15713372	15925337	1.302	1.334	1.318	0.022	0.002	0.318
RP11-97D16	20	16884316	17066411	1.266	1.339	1.302	0.051	0.014	0.302
RP11-49G10	20	31184096	31357350	1.206	1.284	1.245	0.055	0.025	0.245

AJHG, Volume 82

RP11-818N12	20	31620526	31739527	0.643	0.725	0.684	0.058	0.016	-0.316
RP11-530M24	20	40329909	40490886	1.295	1.193	1.244	0.072	0.041	0.244
RP11-69D17	20	43163605	43352630	1.454	1.389	1.421	0.046	0.006	0.421
RP11-59I4	20	47450724	47640221	1.330	1.327	1.329	0.002	0.000	0.329
RP11-24K24	20	49431007	49568097	1.246	1.380	1.313	0.095	0.043	0.313
RP11-55E1	20	51802067	51966817	1.255	1.312	1.283	0.040	0.010	0.283
RP11-55L7 *	20	52354414	52530584	1.285	1.243	1.264	0.030	0.006	0.264
RP11-6L15 *	20	52483586	52655568	1.340	1.406	1.373	0.046	0.008	0.373
RP11-313K4 *	21	9914909	9960850	0.643	0.775	0.709	0.093	0.048	-0.291
RP13-607M18 *	21	10037729	10121693	0.612	0.703	0.657	0.065	0.017	-0.343
RP11-598G6	21	26207412	26384972	1.300	1.321	1.310	0.015	0.001	0.310
RP11-143L12	X	20864848	21027202	1.299	1.210	1.255	0.063	0.029	0.255
RP11-423H3	X	47543016	47765563	1.257	1.302	1.279	0.031	0.006	0.279
RP11-274G4	X	98743936	98843678	1.275	1.216	1.245	0.042	0.014	0.245
RP11-544P15	X	106533547	106737757	0.731	0.622	0.676	0.077	0.027	-0.324
RP11-485M23	X	111718997	111913807	1.284	1.374	1.329	0.064	0.018	0.329
RP11-65G20	X	137189791	137353749	0.733	0.742	0.738	0.006	0.000	-0.262
CTD-2546H24	Y	7230583	7426668	1.311	1.339	1.325	0.019	0.002	0.325
CTD-2024A13	Y	14358563	14583293	1.314	1.226	1.270	0.062	0.025	0.270
CTD-2027O14	Y	26874989	27052696	1.212	1.289	1.250	0.054	0.023	0.250

2G

Reporter ID	Chromosome	Start Position	End Position	1961 vs. 1962	1961 vs. 1962 (DS)	Average	St. Dev.	p Value	Delta
RP11-650N17	1	71777117	71942517	0.878	0.858	0.868	0.014	0.006	-0.132
RP11-655G3	1	108410916	108441400	1.163	1.120	1.142	0.030	0.022	0.142
RP11-689D19	2	209202921	209401721	0.841	0.882	0.861	0.029	0.021	-0.139
RP11-586O10	3	34023900	34229150	0.888	0.842	0.865	0.033	0.028	-0.135
RP11-359H3	3	121651164	121848103	1.135	1.209	1.172	0.052	0.043	0.172
RP11-230B20	3	159990489	160173453	1.137	1.190	1.163	0.037	0.025	0.163
RP11-606I11	3	181875554	182069556	0.855	0.871	0.863	0.011	0.003	-0.137
RP11-57E2	4	30877611	31057106	1.182	1.126	1.154	0.039	0.031	0.154
RP11-421G17	4	33893618	34128074	1.184	1.260	1.222	0.053	0.027	0.222
RP11-709A12	4	45148264	45291524	1.184	1.136	1.160	0.034	0.022	0.160
RP11-815J5	4	62284794	62469728	1.140	1.152	1.146	0.008	0.002	0.146
RP11-371E22	4	167180857	167367965	1.243	1.197	1.220	0.033	0.011	0.220
RP11-755L8	4	168487793	168703425	1.129	1.176	1.152	0.033	0.023	0.152
RP11-652J12	4	190955307	191141497	1.206	1.162	1.184	0.031	0.014	0.184
RP11-126I13	5	11199805	11366567	0.831	0.866	0.848	0.025	0.014	-0.152
RP11-59E15	5	22502266	22658825	1.181	1.124	1.152	0.040	0.033	0.152
RP11-451M5	5	43942203	44116779	1.188	1.119	1.153	0.049	0.047	0.153
RP11-554L4	5	57796725	57961052	0.873	0.798	0.835	0.053	0.048	-0.165
RP11-744K19	5	82531944	82671305	1.182	1.119	1.150	0.044	0.041	0.150
RP11-500D21	5	131806486	131994522	1.136	1.150	1.143	0.010	0.002	0.143
RP11-335G16	7	23500373	23541646	1.106	1.160	1.133	0.038	0.039	0.133
RP11-39H7	7	81794174	82009417	1.151	1.139	1.145	0.008	0.002	0.145
RP11-108H23	7	132752166	132919188	0.863	0.847	0.855	0.011	0.003	-0.145
RP11-29B3	7	136957814	137110063	1.127	1.155	1.141	0.020	0.010	0.141
RP11-546K23	8	3329536	3485899	1.157	1.128	1.142	0.020	0.010	0.142
RP11-802B19	8	41425293	41669161	0.827	0.890	0.858	0.044	0.046	-0.142
RP11-274C23	8	63597001	63764877	0.856	0.792	0.824	0.045	0.031	-0.176
RP11-650P20	8	79097476	79239853	0.843	0.871	0.857	0.020	0.010	-0.143
RP11-321J18	8	128074753	128270755	1.154	1.129	1.141	0.017	0.008	0.141
RP11-264O15	9	33777639	33810329	0.853	0.871	0.862	0.013	0.004	-0.138
RP11-73E13	9	38765151	38900566	0.828	0.760	0.794	0.048	0.026	-0.206
RP11-275N7	9	93765219	93870577	1.149	1.224	1.187	0.053	0.038	0.187
RP11-259A6	10	80084777	80241593	1.118	1.158	1.138	0.028	0.020	0.138
RP11-121P20	10	86396539	86560655	1.117	1.181	1.149	0.045	0.044	0.149
RP11-145J6	13	34595023	34786257	1.160	1.120	1.140	0.028	0.019	0.140
RP13-491G3	14	64440780	64555988	1.157	1.133	1.145	0.017	0.007	0.145

AJHG, Volume 82

RP11-336A14	14	102997440	103190706	1.166	1.114	1.140	0.036	0.032	0.140
CTD-2039A2	15	24751270	24899705	0.784	0.801	0.792	0.012	0.002	-0.208
RP11-3D4	15	31802414	31975482	0.844	0.870	0.857	0.018	0.008	-0.143
RP11-56O2	22	43835143	43986931	1.148	1.121	1.134	0.019	0.010	0.134

2H

Reporter ID	Chromosome	Start Position	End Position	2041 vs. 2042	2041 vs. 2042 (DS)	Average	St. Dev.	p Value	Delta
RP11-86E6	3	132663427	132799298	0.739	0.793	0.766	0.038	0.013	-0.234
RP11-96L13	3	165515683	165669550	0.752	0.776	0.764	0.017	0.003	-0.236
RP11-202A11	3	184740235	184921205	0.700	0.612	0.656	0.062	0.016	-0.344
RP11-181M20	4	3604722	3753769	1.272	1.298	1.285	0.018	0.002	0.285
RP11-266A18	5	83928398	83999123	1.194	1.291	1.243	0.069	0.038	0.243
RP11-467H10	7	76297379	76493929	1.261	1.199	1.230	0.044	0.018	0.230
RP11-410H14	12	27444118	27483233	0.786	0.765	0.775	0.015	0.002	-0.225
RP11-382E17	12	116873048	116901729	0.813	0.754	0.784	0.041	0.018	-0.216
RP11-548H16	13	46281549	46480320	0.782	0.726	0.754	0.040	0.013	-0.246
RP11-454P4	13	80213444	80406650	0.811	0.722	0.767	0.063	0.035	-0.233
RP11-782J13	16	64005743	64077357	1.232	1.253	1.243	0.015	0.002	0.243
RP11-610O13	16	76412407	76570591	1.248	1.267	1.258	0.014	0.001	0.258
RP11-788A9	16	85684077	85884539	1.278	1.250	1.264	0.020	0.003	0.264
RP11-792K19	17	23003373	23212015	1.198	1.272	1.235	0.053	0.024	0.235
RP11-13K12	17	73020577	73183184	0.662	0.709	0.686	0.033	0.005	-0.314
RP11-597F15	18	18745326	18900408	1.178	1.256	1.217	0.056	0.031	0.217
RP11-597H10	18	68319013	68481745	1.206	1.277	1.242	0.050	0.021	0.242
RP11-110A24	19	134914	327591	1.194	1.279	1.236	0.060	0.031	0.236
RP11-86B23	19	9105583	9267119	1.192	1.265	1.228	0.051	0.024	0.228
RP11-1007G22	19	22639055	22832530	1.259	1.258	1.258	0.001	0.000	0.258
RP11-725P4	19	45333542	45499391	1.178	1.277	1.227	0.071	0.045	0.227
RP11-108F6	19	52983966	53130358	1.286	1.189	1.238	0.068	0.039	0.238
RP11-95I3	20	38746709	38943638	1.309	1.302	1.305	0.005	0.000	0.305
RP11-16D6	20	42883390	43051292	1.288	1.331	1.309	0.030	0.005	0.309
RP11-3B13	20	58403074	58586126	1.272	1.177	1.224	0.068	0.043	0.224
CTD-2103O7	21	41580064	41787803	1.195	1.280	1.237	0.060	0.031	0.237
RP11-892O8	22	19833746	20018935	0.754	0.813	0.783	0.042	0.018	-0.217
CTD-2509K5	X	88451702	88588197	0.735	0.786	0.760	0.036	0.011	-0.240

21

Reporter ID	Chromosome	Start Position	End Position	2961 vs. 2962	2961 vs. 2962 (DS)	Average	St. Dev.	p Value	Delta
CTD-2130O1	1	52710619	52837861	1.193	1.255	1.224	0.044	0.019	0.224
RP11-440N12	1	105215307	105378138	0.759	0.798	0.778	0.028	0.008	-0.222
RP11-357C13	1	108765646	108810214	1.307	1.208	1.257	0.070	0.035	0.257
CTD-2325O12	1	110511513	110641073	1.281	1.273	1.277	0.006	0.000	0.277
RP11-361M9	1	160197646	160403993	0.752	0.802	0.777	0.035	0.012	-0.223
RP11-146E14	1	170919423	171114221	0.782	0.788	0.785	0.004	0.000	-0.215
RP11-464N3	1	232521388	232717181	0.763	0.802	0.782	0.028	0.008	-0.218
CTD-2110B24	1	238056345	238165989	1.287	1.332	1.310	0.032	0.005	0.310
RP11-478B8	2	16618896	16666457	0.724	0.669	0.697	0.040	0.008	-0.303
RP11-215G3	2	85414971	85592359	1.231	1.223	1.227	0.006	0.000	0.227
CTD-2365A22	2	95273934	95399898	1.246	1.181	1.214	0.046	0.022	0.214
RP11-513F2	2	99894139	100083116	1.227	1.292	1.260	0.046	0.016	0.260
RP11-813K15	2	103283475	103477750	1.194	1.284	1.239	0.063	0.033	0.239
RP11-328C22	2	144864321	145058765	1.222	1.285	1.253	0.045	0.015	0.253
RP11-621O6	2	149864072	150052618	1.224	1.238	1.231	0.010	0.001	0.231
RP11-808E19	2	176250898	176301726	0.805	0.769	0.787	0.026	0.007	-0.213
RP11-577G17	2	197849749	198035491	1.231	1.274	1.253	0.030	0.007	0.253
RP11-563B23	2	198685438	198841531	1.286	1.307	1.296	0.015	0.001	0.296
RP11-459I19	2	219360030	219558204	1.283	1.384	1.334	0.071	0.022	0.334
RP11-33P6	2	222676551	222778749	1.210	1.228	1.219	0.013	0.002	0.219
RP11-553B12	3	5469712	5639607	1.230	1.223	1.226	0.005	0.000	0.226
RP11-554J6	3	21537093	21725475	1.331	1.416	1.374	0.060	0.013	0.374
RP11-546P7	3	36847088	37049965	1.322	1.245	1.283	0.054	0.018	0.283
RP11-24F11	3	46359969	46545373	1.240	1.230	1.235	0.007	0.000	0.235
RP11-296C15	3	54007388	54177566	1.241	1.228	1.234	0.009	0.001	0.234
RP11-267F10	3	129026680	129145218	1.296	1.270	1.283	0.019	0.002	0.283
RP11-454E1	3	138377734	138557659	1.231	1.311	1.271	0.057	0.021	0.271
RP11-792P6 *	3	142657261	142860466	1.244	1.230	1.237	0.010	0.001	0.237
RP11-788O7 *	3	142714170	142914940	1.372	1.319	1.346	0.037	0.006	0.346
RP11-455K18	3	153519592	153691821	1.257	1.212	1.235	0.031	0.009	0.235
RP11-238O15	4	9110856	9287922	1.415	1.351	1.383	0.045	0.007	0.383
RP11-117E8	4	54808801	54986197	1.218	1.275	1.247	0.040	0.013	0.247
RP11-653L5	4	71117825	71274064	1.187	1.277	1.232	0.063	0.035	0.232
RP11-60K19	4	137064432	137207149	1.295	1.191	1.243	0.073	0.043	0.243
RP11-108L13	4	141960733	142108832	1.254	1.289	1.271	0.025	0.004	0.271
RP11-117D6	4	159969920	160127117	1.225	1.282	1.253	0.040	0.012	0.253

AJHG, Volume 82

RP11-714P8	4	168220000	168356533	0.696	0.806	0.751	0.078	0.046	-0.249
RP11-710P14	5	63111235	63282315	1.206	1.235	1.221	0.020	0.004	0.221
RP11-440B2	6	27344283	27527702	1.283	1.263	1.273	0.014	0.001	0.273
RP11-418F15	6	39224508	39433958	1.194	1.255	1.225	0.043	0.018	0.225
RP11-58H10	6	138862191	139072995	1.264	1.351	1.307	0.062	0.020	0.307
RP11-656E22	7	136831678	136880021	0.756	0.813	0.784	0.040	0.017	-0.216
RP11-11B23	8	41198833	41337788	1.339	1.348	1.344	0.007	0.000	0.344
RP11-765K18	8	99359921	99551252	1.212	1.216	1.214	0.003	0.000	0.214
CTD-2007N20	8	130164668	130196526	1.245	1.251	1.248	0.004	0.000	0.248
RP11-469D16	10	21741276	21903071	1.221	1.228	1.224	0.005	0.000	0.224
RP11-509M10	10	42009772	42104807	0.722	0.700	0.711	0.016	0.002	-0.289
RP11-539G23	11	73390672	73579160	1.230	1.229	1.229	0.001	0.000	0.229
RP11-62P15	12	3040691	3210738	1.224	1.217	1.220	0.005	0.000	0.220
RP11-410H14	12	27444118	27483233	0.727	0.672	0.699	0.039	0.008	-0.301
RP11-435A10	12	113210058	113398300	0.688	0.717	0.703	0.021	0.002	-0.297
RP11-30C21	13	95128758	95306078	1.263	1.194	1.229	0.049	0.022	0.229
RP11-280C21	14	23180312	23338319	1.220	1.307	1.264	0.062	0.026	0.264
RP11-643H15	14	62214349	62391008	1.255	1.176	1.215	0.055	0.031	0.215
RP11-73O2	14	71385626	71531927	1.286	1.179	1.232	0.076	0.049	0.232
CTD-2130E19	15	20462693	20600001	1.197	1.295	1.246	0.069	0.037	0.246
RP11-48C8	15	24350490	24494628	1.258	1.274	1.266	0.011	0.001	0.266
RP11-106P7	15	32623288	32788452	1.296	1.197	1.246	0.071	0.039	0.246
RP13-510D9	15	62851705	62989371	1.418	1.306	1.362	0.079	0.023	0.362
RP11-152F13	15	80481136	80694711	1.247	1.222	1.235	0.018	0.003	0.235
RP11-773G7	16	235507	414290	1.185	1.282	1.233	0.069	0.041	0.233
RP11-721N13	16	10416985	10617222	1.202	1.240	1.221	0.026	0.007	0.221
RP11-697O3	16	11683993	11853930	1.312	1.287	1.300	0.018	0.002	0.300
RP11-566I3	16	14795468	14989398	1.299	1.332	1.315	0.024	0.003	0.315
RP11-2M20	16	17074705	17250878	1.360	1.347	1.354	0.009	0.000	0.354
RP11-36M8	16	17231693	17411612	1.357	1.241	1.299	0.083	0.036	0.299
RP11-674B7	16	28557395	28788512	1.295	1.320	1.308	0.018	0.002	0.308
RP11-674I4	16	29985331	30091982	1.273	1.214	1.243	0.042	0.015	0.243
RP11-778B20	16	48913873	49113421	1.298	1.252	1.275	0.033	0.007	0.275
RP11-692N23	16	74801231	75001784	1.168	1.258	1.213	0.064	0.042	0.213
RP11-345K17 *	16	76833375	77078060	1.288	1.225	1.257	0.044	0.014	0.257
RP11-798L10 *	16	77242386	77447694	1.216	1.216	1.216	0.000	0.000	0.216
RP11-808A12	16	82667973	82839698	1.206	1.274	1.240	0.048	0.019	0.240
RP11-680G10	16	83891074	84063435	1.265	1.255	1.260	0.007	0.000	0.260
RP11-22G8	16	86026865	86190517	1.308	1.196	1.252	0.080	0.047	0.252

AJHG, Volume 82

RP11-723B3	17	4496300	4710353	0.771	0.804	0.787	0.023	0.006	-0.213
RP11-664D5	17	5675442	5867778	1.272	1.204	1.238	0.048	0.020	0.238
RP11-394F9	17	12090839	12271366	1.224	1.224	1.224	0.000	0.000	0.224
RP11-792K19	17	23003373	23212015	1.221	1.283	1.252	0.044	0.015	0.252
RP11-646F19	17	30889109	31059729	1.220	1.262	1.241	0.030	0.008	0.241
RP11-639G19	17	36732410	36917852	1.471	1.550	1.511	0.056	0.006	0.511
RP11-502C16	17	42418934	42607623	1.265	1.258	1.262	0.005	0.000	0.262
RP11-629B3	17	52704270	52902974	1.321	1.330	1.325	0.006	0.000	0.325
RP11-583F2	17	60312211	60485432	1.369	1.284	1.326	0.060	0.017	0.326
RP11-376P6	18	8021809	8213926	1.429	1.325	1.377	0.073	0.018	0.377
CTD-2594A10	18	14379514	14568696	1.443	1.383	1.413	0.042	0.005	0.413
RP11-62M21	18	34297527	34473934	1.235	1.234	1.235	0.001	0.000	0.235
RP11-814I23	18	45570558	45750720	1.192	1.284	1.238	0.065	0.036	0.238
RP11-326N20	18	47306010	47496852	1.263	1.228	1.246	0.025	0.005	0.246
RP11-458L11	18	69442482	69639405	1.271	1.195	1.233	0.053	0.025	0.233
RP11-75H6	19	902641	1095485	1.288	1.311	1.300	0.016	0.001	0.300
RP11-86B23	19	9105583	9267119	1.188	1.273	1.230	0.060	0.032	0.230
RP11-319O10	19	15004017	15166368	1.255	1.222	1.239	0.024	0.005	0.239
CTD-2542J8	19	16991598	17150284	1.249	1.222	1.235	0.019	0.003	0.235
CTD-2285I15	19	20283011	20453165	1.230	1.238	1.234	0.005	0.000	0.234
RP11-460G17 *	19	23846151	24003299	1.336	1.240	1.288	0.068	0.027	0.288
CTD-2112N10 *	19	23952703	24085177	1.269	1.240	1.254	0.021	0.003	0.254
RP11-593H12	19	33512105	33687076	1.331	1.368	1.350	0.026	0.003	0.350
RP11-276F19	19	33854271	34018080	1.273	1.243	1.258	0.022	0.003	0.258
RP11-814C11	19	49732664	49934259	1.258	1.187	1.222	0.050	0.024	0.222
RP11-684C2	19	59292661	59430468	1.289	1.353	1.321	0.045	0.010	0.321
RP11-579P6	19	62189522	62329201	1.274	1.171	1.222	0.073	0.049	0.222
RP11-725H20	20	817516	1008037	1.276	1.253	1.265	0.016	0.002	0.265
RP11-469O16	20	7820561	8033602	1.246	1.246	1.246	0.000	0.000	0.246
RP11-38N5	20	8231669	8384607	1.242	1.302	1.272	0.043	0.012	0.272
RP11-26C13	20	9378179	9557152	1.437	1.327	1.382	0.077	0.020	0.382
RP11-472P17	20	13247065	13416111	0.786	0.749	0.768	0.026	0.006	-0.232
RP11-134G22	20	15084989	15249639	1.228	1.225	1.226	0.002	0.000	0.226
RP11-20J14	20	21584079	21755178	1.252	1.262	1.257	0.007	0.000	0.257
RP11-473J15	20	22449495	22642531	1.202	1.240	1.221	0.027	0.007	0.221
RP11-3A13	20	39902316	40061779	1.265	1.184	1.224	0.057	0.031	0.224
RP11-1M12	20	40441077	40618328	1.267	1.185	1.226	0.058	0.032	0.226
RP11-120I11	20	47124618	47275028	1.342	1.316	1.329	0.018	0.002	0.329
RP11-59I4	20	47450724	47640221	1.365	1.299	1.332	0.047	0.010	0.332

CTD-2190A14	20	48869239	48964893	1.297	1.347	1.322	0.036	0.006	0.322
RP11-92B18	20	52144986	52315494	1.238	1.322	1.280	0.060	0.022	0.280
RP11-3B13	20	58403074	58586126	1.297	1.237	1.267	0.043	0.012	0.267
RP11-554K20	21	17939266	18180561	1.239	1.201	1.220	0.027	0.007	0.220
RP11-301E1	21	23202278	23398323	1.281	1.195	1.238	0.061	0.031	0.238
RP11-281H3	21	31903242	32080327	1.232	1.223	1.227	0.007	0.000	0.227
CTD-2522F24	22	17308437	17440893	0.789	0.759	0.774	0.021	0.004	-0.226
RP11-290I2	22	39666548	39871587	0.789	0.755	0.772	0.024	0.005	-0.228
RP11-297K22	X	29890295	30041585	1.248	1.338	1.293	0.063	0.023	0.293
RP11-319L3	X	42227031	42269988	0.756	0.779	0.768	0.017	0.003	-0.232
RP11-273C1	X	69320153	69498605	1.307	1.257	1.282	0.035	0.008	0.282
CTD-2510I3	Y	4646482	4867940	1.261	1.208	1.235	0.038	0.013	0.235
CTD-2103J13	Y	8268981	8415083	1.218	1.252	1.235	0.024	0.005	0.235
CTD-2576F23	Y	8636752	8771089	1.253	1.318	1.285	0.046	0.013	0.285
CTD-2123E19	Y	15810980	15970442	1.205	1.226	1.216	0.015	0.002	0.216
CTD-2114E11	Y	24187631	24286063	1.244	1.188	1.216	0.040	0.017	0.216
CTD-2237F12	Y	26827699	26941917	1.240	1.195	1.217	0.032	0.010	0.217

(A through I) Table displaying all loci differing at least three global standard deviations (SDs) from the average for nine studied PD discordant MZ twin pairs. The cut off SD was calculated for each twin pair with all clones that remained after the filtering procedure. The global SDs for scored clones were as follows:

- (A) twin pair 111 vs. 112: 0.069
- (B) twin pair 291 vs. 292: 0.040
- (C) twin pair 491 vs. 492: 0.049
- (D) twin pair 631 vs. 632: 0.039
- (E) twin pair 701 vs. 702: 0.058
- (F) twin pair 931 vs. 932: 0.074
- (G) twin pair 1961 vs. 1962: 0.042
- (H) twin pair 2041 vs. 2042: 0.050
- (I) twin pair 2961 vs. 2961: 0.065.

The average and the standard deviation were calculated from two independent hybridizations, of which one was performed as a dye-swap experiment (denoted with [DS] in the table header). The p value comes from a t test calculating the likelihood that the ratio of the particular clone is significantly differing from 1 (the theoretical ratio for a normal copy number). Delta indicates the direction of the relative change in copy number. The clones highlighted by asterisks and red color are overlapping/adjacent, which suggests that the genomic extent of the copy-number imbalance is larger than these encompassing a single BAC clone.

Table S3. Variation Common to More Than One Pair of STR Twins

Reporter ID	Chromosome	Start	Stop	111 vs. 112	291 vs. 292	491 vs. 492	631 vs. 632	701 vs. 702	931 vs. 932	1961 vs. 1962	2041 vs. 2042	2961 vs. 2962	No. of TP
RP11-829B14	1	10964418	11158005	RP11-829B14					RP11-829B14				2
RP11-460N5	1	34892938	35081495		RP11-460N5				RP11-460N5				2
RP11-483I17	1	42827687	43011826						RP11-483I17	RP11-483I17		RP11-483I17	3
RP11-297L5	1	43450321	43640385					RP11-297L5		RP11-297L5			2
RP11-174B10	1	66866915	67020336						RP11-174B10			RP11-174B10	2
RP11-806B9	1	66880567	67008249	RP11-806B9					RP11-806B9				2
RP11-82K18	1	89015134	89213918						RP11-82K18			RP11-82K18	2
CTD-2315G12	1	105153655	105235551				CTD-2315G12		CTD-2315G12				2
RP11-724D16	1	105912625	106101725						RP11-724D16			RP11-724D16	2
RP11-65C20	1	106860669	107022740					RP11-65C20		RP11-65C20			2
RP11-544E20	1	111248981	111421921			RP11-544E20		RP11-544E20					2
RP11-633H22	1	116250279	116466983		RP11-633H22						RP11-633H22		2
RP11-361M9	1	161732612	161938959						RP11-361M9		RP11-361M9	RP11-361M9	3
RP11-146E14	1	172454389	172649187								RP11-146E14	RP11-146E14	2
RP11-796G10	1	178395125	178602163	RP11-796G10					RP11-796G10				2
RP11-464N3	1	234261970	234457763						RP11-464N3			RP11-464N3	2
RP11-478B8	2	16560749	16608310						RP11-478B8			RP11-478B8	2
RP11-275H9	2	23659827	23827255						RP11-275H9		RP11-275H9		2
CTD-2010E9	2	36503134	36670189						CTD-2010E9		CTD-2010E9		2
CTD-2011N14	2	40240261	40466310	CTD-2011N14		CTD-2011N14							2
RP11-321E13	2	55276232	55438372			RP11-321E13				RP11-321E13			2
RP11-	2	55389781	55551491			RP11-		RP11-					2

AJHG, Volume 82

116L19						116L19		116L19					
RP11-281E9	2	63291360	63465214			RP11-281E9		RP11-281E9					2
CTD-2330O1	2	67150496	67286553						CTD-2330O1			CTD-2330O1	2
RP11-307C17	2	76818737	77023221				RP11-307C17	RP11-307C17					2
RP11-748B21	2	81310651	81529881			RP11-748B21		RP11-748B21					2
RP11-215G3	2	85356824	85534212						RP11-215G3			RP11-215G3	2
RP13-491C14	2	89819814	89950177			RP13-491C14		RP13-491C14					2
RP13-570C17	2	91004934	91094634			RP13-570C17		RP13-570C17					2
RP11-134N21	2	94689898	94858748			RP11-134N21			RP11-134N21				2
RP11-180L4	2	110132505	110293342	RP11-180L4								RP11-180L4	2
RP11-132E12	2	111382651	111442731		RP11-132E12				RP11-132E12				2
RP11-116A14	2	120217307	120345769	RP11-116A14						RP11-116A14			2
RP11-731N3	2	124453815	124660711						RP11-731N3		RP11-731N3		2
RP11-27C4	2	125450391	125623921					RP11-27C4				RP11-27C4	2
RP11-704N17	2	126412915	126604329			RP11-704N17		RP11-704N17					2
RP11-313D11	2	147881633	147913995			RP11-313D11		RP11-313D11					2
RP11-344K7	2	154750191	154784597						RP11-344K7			RP11-344K7	2
RP11-275B11	2	159034369	159214278	RP11-275B11					RP11-275B11				2
RP11-668H8	2	162188045	162347093					RP11-668H8				RP11-668H8	2
RP11-760C21	2	166365143	166559908						RP11-760C21		RP11-760C21		2
RP11-609I2	2	167462476	167504106					RP11-609I2	RP11-609I2			RP11-609I2	3
RP11-118K10	2	173687980	173746717	RP11-118K10					RP11-118K10				2
CTD-2112J13	2	180770723	180885113			CTD-2112J13		CTD-2112J13					2
RP11-20H13	2	180979378	181128640		RP11-20H13		RP11-20H13		RP11-20H13				3
RP11-104A23	2	187976679	188123741						RP11-104A23			RP11-104A23	2
RP11-774M2	2	198568177	198759383						RP11-774M2		RP11-774M2	RP11-774M2	3
RP11-679E21	2	209663680	209872703			RP11-679E21		RP11-679E21					2
RP11-293L17	2	211734934	211888606			RP11-293L17		RP11-293L17					2
RP11-541F21	2	212203286	212392406		RP11-541F21			RP11-541F21					2
RP11-129D2	2	218472293	218631927		RP11-129D2				RP11-129D2				2

AJHG, Volume 82

RP11-459I19	2	219242769	219440943						RP11-459I19			RP11-459I19	2
CTD-2253O7	2	221279673	221345301						CTD-2253O7		CTD-2253O7		2
RP11-346N9	2	225861736	226035123			RP11-346N9				RP11-346N9			2
RP11-763N15	2	232424468	232628962						RP11-763N15			RP11-763N15	2
RP11-363G24	2	242568995	242720443						RP11-363G24			RP11-363G24	2
RP11-1159G17	2	242588450	242750818	RP11-1159G17				RP11-1159G17					2
RP11-512O18	3	3445499	3634262		RP11-512O18		RP11-512O18						2
RP11-367B1	3	3659910	3842739			RP11-367B1	RP11-367B1						2
RP11-625I9	3	21587287	21738891	RP11-625I9					RP11-625I9				2
RP11-424H11	3	22831431	23001577	RP11-424H11						RP11-424H11	RP11-424H11	RP11-424H11	3
RP11-546P7	3	36847088	37049965		RP11-546P7				RP11-546P7			RP11-546P7	3
RP11-554O1	3	54612414	54778936						RP11-554O1			RP11-554O1	2
RP11-705L22	3	71823731	71977929			RP11-705L22	RP11-705L22						2
RP11-675B20	3	90297133	90495050	RP11-675B20			RP11-675B20						2
RP11-557B13	3	90369344	90571847	RP11-557B13	RP11-557B13			RP11-557B13					3
RP11-630P6	3	111786982	111950555		RP11-630P6	RP11-630P6							2
RP11-267F10	3	129026672	129145210					RP11-267F10				RP11-267F10	2
RP11-60C5	3	131171405	131347364					RP11-60C5	RP11-60C5	RP11-60C5			3
RP11-211F21	3	133884335	133912075	RP11-211F21						RP11-211F21	RP11-211F21	RP11-211F21	3
RP11-401F7	3	137044396	137239530			RP11-401F7		RP11-401F7					2
RP11-454E1	3	138377726	138557651					RP11-454E1				RP11-454E1	2
RP11-297M21	3	142911597	143083283	RP11-297M21				RP11-297M21					2
RP11-454K23	3	143154643	143390328					RP11-454K23				RP11-454K23	2
RP11-455K18	3	153519584	153691813	RP11-455K18								RP11-455K18	2
RP11-151F4	3	154827000	154971970					RP11-151F4				RP11-151F4	2
RP11-588G9	3	155160927	155306631	RP11-588G9	RP11-588G9								2
RP11-791E6	3	157467034	157625107			RP11-791E6				RP11-791E6			2
RP11-555M1	3	158294230	158503245	RP11-555M1					RP11-555M1				2
RP11-476D5	3	163694312	163889096	RP11-476D5			RP11-476D5						2
RP11-385J1	3	179867091	179907301						RP11-385J1	RP11-385J1			2

AJHG, Volume 82

RP11-501F24	3	190247476	190432410	RP11-501F24							RP11-501F24	2
RP11-152D21	3	195945577	196130325					RP11-152D21		RP11-152D21		2
CTD-2297G23	3	198367492	198505274					CTD-2297G23		CTD-2297G23		2
RP11-181M20	4	3537551	3686598							RP11-181M20	RP11-181M20	2
RP11-238O15	4	9043685	9220751					RP11-238O15			RP11-238O15	2
RP11-190D22	4	31223081	31388015	RP11-190D22		RP11-190D22						2
RP11-617D20	4	38280914	38413870		RP11-617D20			RP11-617D20				2
RP11-515L7	4	49221787	49262552					RP11-515L7	RP11-515L7			2
RP11-117E8	4	54662630	54840026					RP11-117E8			RP11-117E8	2
RP11-21A18	4	55551528	55699768			RP11-21A18				RP11-21A18		2
RP11-607D16	4	55795799	55999061					RP11-607D16	RP11-607D16			2
RP11-815J5	4	62138623	62323557	RP11-815J5					RP11-815J5			2
RP11-795O2	4	64136836	64333184		RP11-795O2			RP11-795O2				2
RP11-747I19	4	67232699	67413316	RP11-747I19					RP11-747I19		RP11-747I19	3
RP11-532P3	4	85463100	85628429	RP11-532P3				RP11-532P3				2
RP11-175O23	4	86585092	86754186		RP11-175O23	RP11-175O23						2
RP11-804J24	4	108399443	108587526			RP11-804J24		RP11-804J24				2
RP11-631H3	4	110660532	110841511			RP11-631H3		RP11-631H3				2
RP11-384L4	4	117317092	117491679	RP11-384L4		RP11-384L4						2
CTD-2152D18	4	131395534	131533412			CTD-2152D18		CTD-2152D18				2
RP11-789P5	4	137295362	137489545							RP11-789P5	RP11-789P5	2
RP11-259G7	4	154858443	155059548					RP11-259G7				2
RP11-117D6	4	159831765	159988962					RP11-117D6			RP11-117D6	2
RP11-75A5	4	165685728	165865434					RP11-75A5			RP11-75A5	2
RP11-792E2	4	190739374	190953631						RP11-792E2		RP11-792E2	2
RP11-642E3	5	39267853	39337394					RP11-642E3			RP11-642E3	2
RP11-742F23	5	53205455	53377365		RP11-742F23		RP11-742F23					2
RP11-597A9	5	55322014	55502861			RP11-597A9		RP11-597A9				2
RP11-554L4	5	57796725	57961052	RP11-554L4						RP11-554L4		2
CTD-2130D24	5	68274044	68318437			CTD-2130D24		CTD-2130D24		CTD-2130D24		3

AJHG, Volume 82

RP11-33O5	5	75543667	75744059					RP11-33O5		RP11-33O5				2
RP11-266A18	5	83928398	83999123						RP11-266A18		RP11-266A18			2
RP11-368F9	5	126082168	126145619						RP11-368F9				RP11-368F9	2
RP11-405A4	5	129810841	129871767	RP11-405A4									RP11-405A4	2
RP11-592L23	5	147113720	147284090	RP11-592L23					RP11-592L23					2
RP11-661B12	5	148732057	148825069	RP11-661B12					RP11-661B12					2
RP11-565F5	5	151779535	151973354				RP11-565F5	RP11-565F5						2
RP11-364P7	5	155941172	155995898	RP11-364P7						RP11-364P7	RP11-364P7	RP11-364P7		4
RP11-690I8	5	175267884	175481333		RP11-690I8						RP11-690I8			2
RP11-816N20	6	893051	937252						RP11-816N20				RP11-816N20	2
RP11-784F20	6	13223270	13403480			RP11-784F20				RP11-784F20				2
RP11-814L16	6	33700000	33819324					RP11-814L16		RP11-814L16				2
RP11-400E17	6	44181614	44317825			RP11-400E17		RP11-400E17						2
RP11-45C7	6	164299091	164477752						RP11-45C7				RP11-45C7	2
RP11-732J7	7	19262650	19443886			RP11-732J7	RP11-732J7							2
RP11-800O18	7	43872122	44084663		RP11-800O18		RP11-800O18							2
RP11-237O15	7	57194816	57363568					RP11-237O15	RP11-237O15					2
RP11-313P13	7	71971990	72164907					RP11-313P13		RP11-313P13				2
RP11-108H23	7	132945451	133112473			RP11-108H23				RP11-108H23				2
RP11-656E22	7	137024963	137073306						RP11-656E22				RP11-656E22	2
RP11-67D13	8	3002315	3210188		RP11-67D13					RP11-67D13				2
RP11-669B6	8	43562624	43771451			RP11-669B6				RP11-669B6				2
RP11-792P18	8	54397655	54582117			RP11-792P18		RP11-792P18						2
RP11-36P16	8	60277202	60460134			RP11-36P16	RP11-36P16							2
RP11-814M18	8	64246885	64457495				RP11-814M18				RP11-814M18			2
RP11-286F13	8	81933912	82110794					RP11-286F13		RP11-286F13				2
RP11-390M9	8	83186370	83345110			RP11-390M9					RP11-390M9			2
RP11-560C12	8	121185510	121209584				RP11-560C12	RP11-560C12						2
RP11-734O23	8	136100411	136295277						RP11-734O23	RP11-734O23				2
RP11-264O15	9	33777639	33810329	RP11-264O15							RP11-264O15			2

AJHG, Volume 82

RP11-118H5	9	72525348	72701590		RP11-118H5	RP11-118H5							2
RP11-371A10	9	139807063	140005621	RP11-371A10								RP11-371A10	2
RP11-363N22	10	855498	1038755					RP11-363N22		RP11-363N22			2
RP13-501K8	10	5059805	5099716	RP13-501K8		RP13-501K8							2
RP11-333K5	10	6986220	7175535			RP11-333K5	RP11-333K5						2
RP11-509M10	10	42009772	42104807						RP11-509M10			RP11-509M10	2
RP11-218K21	10	45037616	45088880					RP11-218K21	RP11-218K21				2
RP11-712F5	10	60280752	60419665						RP11-712F5			RP11-712F5	2
RP11-808E6	10	87745415	87782787	RP11-808E6				RP11-808E6					2
RP11-617K14	11	16607449	16648384			RP11-617K14			RP11-617K14				2
RP11-147M9	11	30310028	30461033		RP11-147M9				RP11-147M9				2
RP11-116P9	11	55995413	56168647			RP11-116P9		RP11-116P9					2
RP11-796A3	11	71867567	72039804			RP11-796A3		RP11-796A3					2
RP11-539G23	11	73390672	73579160			RP11-539G23						RP11-539G23	2
RP11-641H20	11	123498858	123684676		RP11-641H20			RP11-641H20					2
RP11-178O6	11	132225842	132399372					RP11-178O6				RP11-178O6	2
RP11-645P1	12	8331096	8543886						RP11-645P1			RP11-645P1	2
RP11-410H14	12	27444118	27483233						RP11-410H14		RP11-410H14	RP11-410H14	3
RP13-515F16	12	38346505	38534864					RP13-515F16				RP13-515F16	2
RP11-435A10	12	113231721	113419963								RP11-435A10	RP11-435A10	2
RP11-145J6	13	34595023	34786257				RP11-145J6			RP11-145J6			2
RP11-420J7	13	37349531	37541304						RP11-420J7		RP11-420J7		2
CTD-2085E6	13	41890631	42017569				CTD-2085E6					CTD-2085E6	2
CTD-2012N23	13	73743445	73915995				CTD-2012N23			CTD-2012N23			2
RP11-454P4	13	80213444	80406650						RP11-454P4	RP11-454P4			2
RP11-280C21	14	23180312	23338319						RP11-280C21			RP11-280C21	2
RP11-174A9	14	36680168	36848575			RP11-174A9		RP11-174A9					2
RP11-413D12	14	52883970	53057414	RP11-413D12								RP11-413D12	2
RP11-7302	14	71385626	71531927								RP11-7302	RP11-7302	2
CTD-2532G3	14	75769596	75990315	CTD-2532G3					CTD-2532G3				2

AJHG, Volume 82

RP11-316D3	14	88350350	88407317						RP11-316D3			RP11-316D3	2
RP11-607H20	15	18276592	18476403	RP11-607H20				RP11-607H20				RP11-607H20	3
RP11-48C8	15	24350490	24494628					RP11-48C8				RP11-48C8	2
RP11-720N23	15	26251764	26327179	RP11-720N23	RP11-720N23								2
RP11-6C20	16	3515123	3680499					RP11-6C20	RP11-6C20				2
RP11-77H9	16	8847810	9028458					RP11-77H9				RP11-77H9	2
RP11-697O3	16	11683993	11853930	RP11-697O3				RP11-697O3				RP11-697O3	3
RP11-656O6	16	11943813	12151341					RP11-656O6				RP11-656O6	2
RP11-517A5	16	16057523	16314211					RP11-517A5				RP11-517A5	2
RP11-2M20	16	17074705	17250878	RP11-2M20								RP11-2M20	2
RP11-36M8	16	17231693	17411612					RP11-36M8				RP11-36M8	2
RP11-192G9	16	20198620	20414323	RP11-192G9								RP11-192G9	2
RP11-683E7	16	21349224	21557244					RP11-683E7		RP11-683E7		RP11-683E7	3
CTD-2175E1	16	25236644	25272092	CTD-2175E1		CTD-2175E1						CTD-2175E1	3
RP11-778G12	16	26460073	26649455	RP11-778G12				RP11-778G12					2
RP11-271C21	16	29306077	29471381	RP11-271C21								RP11-271C21	2
RP11-753J6	16	29536903	29698456					RP11-753J6				RP11-753J6	2
RP11-674I4	16	29985331	30091982					RP11-674I4				RP11-674I4	2
RP11-772B14	16	33810521	33927835		RP11-772B14			RP11-772B14					2
RP11-778B20	16	48913873	49113421					RP11-778B20				RP11-778B20	2
RP11-332G8	16	56903555	57127218					RP11-332G8		RP11-332G8			2
RP11-782J13	16	64005743	64077357					RP11-782J13		RP11-782J13			2
RP11-592L20	16	66773676	66963215					RP11-592L20				RP11-592L20	2
RP11-610O13	16	76412407	76570591	RP11-610O13						RP11-610O13			2
RP11-345K17	16	76833375	77078060					RP11-345K17		RP11-345K17		RP11-345K17	3
RP11-340B7	16	79466917	79623941	RP11-340B7				RP11-340B7				RP11-340B7	3
RP11-529F18	16	83151203	83324309	RP11-529F18								RP11-529F18	2
RP11-680G10	16	83891074	84063435			RP11-680G10		RP11-680G10		RP11-680G10		RP11-680G10	4
RP11-723B3	17	4496300	4710353					RP11-723B3				RP11-723B3	2
RP11-186B7	17	7247848	7448344					RP11-186B7				RP11-186B7	2

AJHG, Volume 82

RP11-657A11	17	9865573	10035291	RP11-657A11							RP11-657A11	2
RP11-621L14	17	14709255	14895469	RP11-621L14							RP11-621L14	2
RP11-484D23	17	18215871	18395498	RP11-484D23					RP11-484D23			2
RP11-792K19	17	23003373	23212015						RP11-792K19	RP11-792K19	RP11-792K19	3
RP11-646F19	17	30889109	31059729	RP11-646F19							RP11-646F19	2
RP11-782E1	17	41339059	41559177						RP11-782E1	RP11-782E1		2
RP11-502C16	17	42418934	42607623	RP11-502C16							RP11-502C16	2
RP11-533E14	17	45294025	45526562						RP11-533E14		RP11-533E14	2
RP11-629B3	17	52704270	52902974	RP11-629B3							RP11-629B3	2
RP11-709H17	17	54053478	54257845	RP11-709H17					RP11-709H17		RP11-709H17	3
RP11-583F2	17	60312211	60485432	RP11-583F2							RP11-583F2	2
RP11-13K12	17	73020577	73183184						RP11-13K12	RP11-13K12		2
CTD-2594A10	18	14379514	14568696						CTD-2594A10		CTD-2594A10	2
RP11-5G23	18	21431314	21583471						RP11-5G23	RP11-5G23		2
RP11-425N7	18	32369321	32553977			RP11-425N7					RP11-425N7	2
RP11-95G24	18	33200000	33382388							RP11-95G24	RP11-95G24	2
RP11-814I23	18	45570558	45750720						RP11-814I23		RP11-814I23	2
RP11-75H6	19	902641	1095485						RP11-75H6		RP11-75H6	2
RP11-579D4	19	2122188	2186549			RP11-579D4					RP11-579D4	2
CTD-2523G7	19	3049189	3290113						CTD-2523G7		CTD-2523G7	2
RP11-631B6	19	5164519	5350029	RP11-631B6		RP11-631B6		RP11-631B6				3
RP11-711A2	19	8860000	9060080	RP11-711A2					RP11-711A2			2
RP11-86B23	19	9105583	9267119							RP11-86B23	RP11-86B23	2
RP11-806N4	19	10461177	10594285			RP11-806N4					RP11-806N4	2
RP11-714D5	19	11490846	11752164	RP11-714D5					RP11-714D5			2
RP11-319O10	19	15004017	15166368			RP11-319O10					RP11-319O10	3
CTD-2542J8	19	16991598	17150284						CTD-2542J8		CTD-2542J8	2
RP11-552E6	19	21354546	21535003						RP11-552E6		RP11-552E6	2
RP11-1007G22	19	22639055	22832530			RP11-1007G22				RP11-1007G22		2
RP11-642I13	19	23335672	23505661				RP11-642I13	RP11-642I13				2

AJHG, Volume 82

CTD-2024E4	19	23466190	23640039			CTD-2024E4	CTD-2024E4												2
RP11-310B10	19	23570458	23715836			RP11-310B10				RP11-310B10									2
RP11-460G17	19	23846151	24003299	RP11-460G17														RP11-460G17	2
CTD-2112N10	19	23952703	24085177	CTD-2112N10														CTD-2112N10	2
CTD-2575I15	19	24061049	24216635			CTD-2575I15												CTD-2575I15	2
CTD-2178C14	19	24207305	24291954			CTD-2178C14						CTD-2178C14	CTD-2178C14						3
RP11-593H12	19	33512105	33687076							RP11-593H12								RP11-593H12	2
RP11-276F19	19	33854271	34018080							RP11-276F19								RP11-276F19	2
RP11-715C22	19	34159859	34350706							RP11-715C22								RP11-715C22	2
RP11-1031M21	19	43251702	43463078							RP11-1031M21								RP11-1031M21	2
CTD-2346H11	19	44120293	44248642							CTD-2346H11								CTD-2346H11	2
RP11-723M16	19	45960000	46142574							RP11-723M16								RP11-723M16	2
RP11-726N13	19	46693280	46873739						RP11-726N13	RP11-726N13								RP11-726N13	3
CTD-2512I20	19	46926465	47156371				CTD-2512I20											CTD-2512I20	2
CTD-2242L24	19	47211132	47312556							CTD-2242L24								CTD-2242L24	2
RP11-653D16	19	47738325	47956951							RP11-653D16								RP11-653D16	2
CTD-2126E3	19	55186738	55360000	CTD-2126E3						CTD-2126E3									2
RP11-163E19	19	57480751	57629093						RP11-163E19									RP11-163E19	2
RP11-684C2	19	59292661	59430468	RP11-684C2			RP11-684C2			RP11-684C2								RP11-684C2	4
RP11-772P23	19	60850445	61018376							RP11-772P23								RP11-772P23	2
RP11-579P6	19	62189522	62329201	RP11-579P6														RP11-579P6	2
RP11-625N13	19	62899143	63118829							RP11-625N13								RP11-625N13	2
RP11-38N5	20	8231669	8384607							RP11-38N5								RP11-38N5	2
RP11-26C13	20	9378179	9557152							RP11-26C13								RP11-26C13	2
RP11-389K22	20	22501076	22620881							RP11-389K22								RP11-389K22	2
CTD-2001C4	20	28085815	28252086			CTD-2001C4												CTD-2001C4	2
RP11-230N6	20	31620526	31739527	RP11-230N6								RP11-230N6						RP11-230N6	3
RP11-22E22	20	37251375	37414264						RP11-22E22									RP11-22E22	2
RP11-95I3	20	38746709	38943638							RP11-95I3								RP11-95I3	2
RP11-1M12	20	40441077	40618328							RP11-1M12			RP11-1M12	RP11-1M12					3

AJHG, Volume 82

RP11-739A15	20	45976880	45997244						RP11-739A15		RP11-739A15		2
RP11-59I4	20	47450724	47640221						RP11-59I4			RP11-59I4	2
RP11-55E1	20	51802067	51966817						RP11-55E1			RP11-55E1	2
RP11-92B18	20	52144986	52315494	RP11-92B18				RP11-92B18			RP11-92B18	RP11-92B18	4
RP11-6L15	20	52483586	52655568						RP11-6L15			RP11-6L15	2
RP11-3B13	20	58403074	58586126								RP11-3B13	RP11-3B13	2
RP11-289G8	21	9749033	9791026					RP11-289G8			RP11-289G8		2
RP11-313K4	21	9914909	9960850						RP11-313K4			RP11-313K4	2
RP11-554K20	21	17939266	18180561	RP11-554K20								RP11-554K20	2
RP11-281H3	21	31903242	32080327						RP11-281H3			RP11-281H3	2
RP11-613N14	21	40122232	40304138			RP11-613N14	RP11-613N14						2
RP11-437O2	22	15930262	16103206						RP11-437O2			RP11-437O2	2
CTD-2522F24	22	17313883	17446339	CTD-2522F24					CTD-2522F24			CTD-2522F24	3
CTD-2103I2	22	26189692	26391869	CTD-2103I2								CTD-2103I2	2
RP11-11B17	22	28949760	29076915						RP11-11B17	RP11-11B17			2
RP11-768B9	22	35398836	35582349	RP11-768B9		RP11-768B9							2
CTD-2014H20	22	35936644	36122165						CTD-2014H20		CTD-2014H20	CTD-2014H20	3
RP11-359O20	X	6456390	6635092	RP11-359O20						RP11-359O20			2
RP11-143L12	X	21015112	21177466			RP11-143L12			RP11-143L12				2
RP11-297K22	X	30040559	30191849							RP11-297K22		RP11-297K22	2
RP11-423H3	X	47671706	47894253						RP11-423H3			RP11-423H3	2
RP11-119E20	X	50302482	50458837				RP11-119E20	RP11-119E20					2
CTD-2405B15	X	57789185	57907115			CTD-2405B15	CTD-2405B15						2
CTD-2276L24	X	64008044	64129107			CTD-2276L24	CTD-2276L24						2
RP11-627J4	X	76290646	76479251				RP11-627J4	RP11-627J4				RP11-627J4	3
RP11-587J3	X	76362435	76526105						RP11-587J3	RP11-587J3			2
RP11-2L17	X	78833495	78996054				RP11-2L17	RP11-2L17					2
RP11-334O9	X	102011136	102025997					RP11-334O9		RP11-334O9		RP11-334O9	3
RP11-284B23	X	104521008	104685685		RP11-284B23			RP11-284B23					2
RP13-	X	108007416	108156743	RP13-									2

AJHG, Volume 82

571F21				571F21				571F21					
RP11-520F13	X	108106171	108263494		RP11-520F13				RP11-520F13				2
RP13-528L18	X	115483405	115571682			RP13-528L18		RP13-528L18					2
RP11-735C15	X	121303873	121511571			RP11-735C15		RP11-735C15					2
RP11-487H22	X	121504125	121670287				RP11-487H22		RP11-487H22				2
RP11-614F19	X	132768037	132943119						RP11-614F19			RP11-614F19	2
RP11-217E15	X	135089371	135251394	RP11-217E15	RP11-217E15								2
RP11-3J3	X	136891063	137053853	RP11-3J3	RP11-3J3								2
RP11-585O13	X	141858788	142046534	RP11-585O13								RP11-585O13	2
RP11-346M2	X	142339337	142513687					RP11-346M2	RP11-346M2				2
RP11-392N8	X	150610775	150792195					RP11-392N8			RP11-392N8		2
RP11-339O3	Y	8585700	8771555		RP11-339O3							RP11-339O3	2
CTD-2024A13	Y	14429826	14654556				CTD-2024A13		CTD-2024A13				2
RP11-446M21	Y	15089236	15303617			RP11-446M21		RP11-446M21					2
RP11-151A7	Y	15140671	15280987					RP11-151A7				RP11-151A7	2
CTD-2123E19	Y	15882243	16041705	CTD-2123E19								CTD-2123E19	2
RP11-166O18	Y	17496617	17617587			RP11-166O18		RP11-166O18					2
RP11-680H1	Y	17586696	17765213		RP11-680H1			RP11-680H1					2
RP11-522A4	Y	17914388	18074742	RP11-522A4				RP11-522A4					2
RP11-5I7	Y	20889976	21063742			RP11-5I7		RP11-5I7					2
CTD-2114E11	Y	24258894	24357326								CTD-2114E11	CTD-2114E11	2
CTD-2237F12	Y	26898962	27013180				CTD-2237F12					CTD-2237F12	2

Loci differing more than two global standard deviations from the average and identified by more than one twin pair in nine PD discordant MZ twin pairs. “No. of TP” denotes the number of twin pairs sharing a deviating clone. Blue and yellow colors highlight clones deviating in three and four twin pairs, respectively.

Table S4. Loci Identified by More Than One Twin Pair and Differing More Than Three Standard Deviations from the Average

Reporter ID	Chromosome	Start	Stop	111 vs. 112	291 vs. 292	491 vs. 492	631 vs. 632	701 vs. 702	931 vs. 932	1961 vs. 1962	2041 vs. 2042	2961 vs. 2962
RP11-361M9	1	161732612	161938959						RP11-361M9			RP11-361M9
RP11-464N3	1	234261970	234457763						RP11-464N3			RP11-464N3
RP11-478B8	2	16560749	16608310						RP11-478B8			RP11-478B8
RP11-215G3	2	85356824	85534212						RP11-215G3			RP11-215G3
RP11-557B13	3	90369344	90571847		RP11-557B13			RP11-557B13				
RP11-60C5	3	131171405	131347364					RP11-60C5	RP11-60C5			
RP11-454E1	3	138377726	138557651						RP11-454E1			RP11-454E1
RP11-238O15	4	9043685	9220751						RP11-238O15			RP11-238O15
RP11-117E8	4	54662630	54840026						RP11-117E8			RP11-117E8
RP11-117D6	4	159831765	159988962						RP11-117D6			RP11-117D6
CTD-2130D24	5	68274044	68318437			CTD-2130D24		CTD-2130D24				
RP11-108H23	7	132945451	133112473			RP11-108H23				RP11-108H23		
RP13-501K8	10	5059805	5099716	RP13-501K8		RP13-501K8						
RP11-509M10	10	42009772	42104807						RP11-509M10			RP11-509M10
RP11-116P9	11	55995413	56168647			RP11-116P9		RP11-116P9				
RP11-410H14	12	27444118	27483233						RP11-410H14		RP11-410H14	RP11-410H14
RP11-697O3	16	11683993	11853930						RP11-697O3			RP11-697O3
RP11-345K17	16	76833375	77078060						RP11-345K17			RP11-345K17
RP11-723B3	17	4496300	4710353						RP11-723B3			RP11-723B3
RP11-792K19	17	23003373	23212015							RP11-792K19		RP11-792K19
CTD-2594A10	18	14379514	14568696						CTD-2594A10			CTD-2594A10
RP11-814I23	18	45570558	45750720						RP11-814I23			RP11-814I23
RP11-75H6	19	902641	1095485						RP11-75H6			RP11-75H6

RP11-86B23	19	9105583	9267119								RP11-86B23	RP11-86B23
RP11-460G17	19	23846151	24003299	RP11-460G17								RP11-460G17
RP11-593H12	19	33512105	33687076						RP11-593H12			RP11-593H12
RP11-276F19	19	33854271	34018080						RP11-276F19			RP11-276F19
RP11-59I4	20	47450724	47640221						RP11-59I4			RP11-59I4
RP11-3B13	20	58403074	58586126								RP11-3B13	RP11-3B13
CTD-2522F24	22	17313883	17446339	CTD-2522F24								CTD-2522F24
RP11-5I7	Y	20889976	21063742			RP11-5I7		RP11-5I7				

“No. of TP” denotes the number of twin pairs sharing the deviating clone. All clones are deviant in two twin pairs, except for RP11-410H14 (highlighted in yellow), which differs in three twin pairs.