

# A Comprehensive Genetic Linkage Map of the Human Genome

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**Table 1.** Characteristics of the genetic markers. Polymorphic allele systems for each chromosome are listed by locus in alphabetical order, unless no locus name has been assigned, in which case the markers appear at the end of the list for that chromosome. Column headings and entries: System-enz: allele system as defined by the probe name and restriction enzyme used to detect the RFLP or appropriate allele system name for non-RFLPs. Pm type: type of polymorphism, where PP is protein polymorphism; PH is haplotype of PCR-able systems; RH is an RFLP haplotype; RR is an RFLP repeat; RS is RFLP site polymorphism; RV is RFLP of the VNTR type; RU is RFLP of unknown type; SSC is a single-strand conformation polymorphism; STR is a synthetic tandem repeat; Tet is a tetranucleotide repeat polymorphism; di- and tri-nucleotide microsatellite polymorphisms are represented by the repeat unit, CA, GA, TTA, CAC, and so forth; and Cx represents complex microsatellite polymorphism. Enzyme abbreviations used for RFLPs are: A, Apa I; B, Bam HI; Bc, Bcl I; Bg, Bgl II; Bn, Ban I; Bp, Bsp 1286; Bs, Bst I; Dr, Dra I; E, Eco RI; Er, Eco RV; Ha, Hae III; H, Hind III; Hc, Hinc II; Hf, Hinf I; Hp, Hpa I; K, Kpn I; M, Msp I; Mb, Mbo I; P, Pst I; Pv, Pvu II; R, Rsa I; S, Sac I; Sc, Sca I; Ss, Sst I; T, Taq I; Tth, Tth 111I; X, Xba I; and Xm, Xma I. AM: assay method used to collect the polymorphism data, where D is DGGE (denaturing gradient gel electrophoresis); E is enzymatic assay; N is

not available; O is OLA (oligonucleotide ligation assay); P is PCR; and S is Southern blot and hybridization. HET% (PIC): percent heterozygosity and, in parentheses, the Polymorphism Information Content [an index of informativeness where 1 = totally informative, see (11)]. For chromosomes 1, 2, 4, 6, 7, 8, 10, 12, 14, 16, and 20 the heterozygosities were calculated from allele frequencies observed in unrelated individuals in the CEPH panel data set. For chromosomes 11, 22, and X the HETs were the observed percentage of heterozygotes in unrelated CEPH panel individuals (90). NIM: number of informative meioses used in the mapping data set, with exception of the X chromosome (90). For each family, this is calculated as the number of CEPH children (sibs) who have information times the number of parents heterozygous for the allele system. Citations: Because of space limitations, only one citation is given that describes the polymorphism; the second citation, if present, refers to the physical localization reference for those loci having cytogenetic localizations; GDB (Genome Data Base) may list additional references. The keys to the citation numbers given in the table, arranged by chromosome, refer to the citations at the back of the table. Abbreviations for journals and unpublished data used also follow the table. The text of the article can be found on pages 67 to 86.

Table 1. (continued)

Location	Locus	System-enz	Pm	HET%		NIM	Citations
			type	AM	(PIC)		
1	ACADM	MCAD-M	RS	S	42(0.33)	203	1
1p36.1-p34	ALPL	pLBK/BBE5'-S	RS	S	21(0.19)	148	2; 2
1p36.1-p34	ALPL	pLBK/BBE5'-Bc	RS	S	42(0.33)	254	3; 2
1p21	AMY2B	AMY2B	CA	P	68(0.63)	463	4; 5
1q21-q23	APOA2	ApoA2	CA	P	73(0.68)	467	6; 7
1q21-q23	APOA2	ApoA2-M	RU	S	25(0.22)	99	8; 7
1q21-q23	ATP1A2	R6-2-3-Bg	RS	S	26(0.23)	181	9; 9
1q21-q23	ATP1A2	R30-2-6-Bg	RS	S	30(0.25)	207	9; 9
1q23-q25.1	AT3	pATIII-P	RS	S	42(0.33)	143	10; 11
1q23-q25.1	AT3	pATIII	PCR	P	42(0.33)	225	12; 11
1q32	CR1	CR1-S	RS	S	12(0.11)	60	13; 14
1q32	CR1	CR1-E	RS	S	50(0.37)	48	15; 14
1q32	CR1	CR1-M	RS	S	67(0.62)	73	15; 14
1q32	CR2	pCR2-1.6-T	RS	S	40(0.32)	235	16; 14
1q21-q23	CRP	Mfd57	CA	P	63(0.57)	346	17; 18
1	D1S2	pL1.22-Bg	RS	S	31(0.26)	335	1
1	D1S7	LMS1-Hf	RV	S	75(0.70)	516	19
1	D1S8	LMS32-A	RV	S	75(0.70)	565	19
1	D1S9	p1-04-T	RU	S	48(0.36)	304	4
1	D1S10	p1-08-T	RS	S	25(0.22)	179	4
1	D1S11	p1-18-Bc	RS	S	49(0.37)	271	20
1	D1S12	p2-05-X	RS	S	25(0.22)	188	20
1	D1S13	p5-22-Pv	RS	S	49(0.37)	368	20
1	D1S14	p6-02-T	RS	S	50(0.37)	307	20
1	D1S15	p1-11B-Bg	RS	S	57(0.50)	358	20
1	D1S15	p1-11B-S	RS	S	46(0.35)	390	20
1	D1S16	p2-32-Bg	RS	S	38(0.30)	227	20
1	D1S17	p3-18-M	RS	S	50(0.37)	352	4
1	D1S17	p3-18-T	RS	S	50(0.37)	352	4
1	D1S18	p3-39-Bg	RS	S	28(0.24)	153	4
1	D1S19	p4-03-S	RS	S	49(0.37)	307	20
1	D1S20	p5-21-Bg	RS	S	11(0.11)	66	4
1	D1S21	p5-34-T	RS	S	46(0.35)	306	20
1	D1S22	p6-04A-Bc	RS	S	49(0.37)	251	20
1	D1S34	CRI-L816-B	RS	S	27(0.23)	72	21
1	D1S35	CRI-L1201-T	RS	S	49(0.37)	131	21
1	D1S36	CRI-L1226-M	RS	S	77(0.74)	210	21
1	D1S37	CRI-R1002-T	RS	S	42(0.33)	169	21
1	D1S38	CRI-S182-M	RS	S	57(0.47)	179	21
1	D1S39	CRI-L423-M	RS	S	42(0.33)	139	21
1	D1S40	CRI-L931-T	RS	S	42(0.33)	78	21

Table 1. (continued)

Location	Locus	System-enz	Pm	HET%		NIM	Citations
			type	AM	(PIC)		
1	D1S41	CRI-L943-T	RS	S	49(0.37)	120	21
1	D1S42	CRI-L1054-M	RS	S	33(0.30)	122	21
1	D1S43	CRI-R275-E	RU	S	33(0.28)	86	21
1	D1S44	CRI-R629-H	RS	S	50(0.37)	158	21
1	D1S45	CRI-L56-M	RS	S	47(0.36)	105	21
1	D1S46	CRI-R39-M	RS	S	26(0.23)	49	21
1	D1S47	CRI-L336-R	RV	S	82(0.80)	271	21
1	D1S48	CRI-L744-R	RU	S	72(0.67)	169	21
1	D1S49	CRI-L1046-M	RU	S	73(0.69)	232	21
1	D1S49	CRI-L1046-T	RU	S	81(0.79)	44	21
1	D1S50	CRI-L1209-T	RU	S	72(0.67)	234	21
1	D1S51	CRI-L1191-M	RS	S	45(0.35)	128	21
1	D1S52	CRI-L112-B	RS	S	39(0.31)	217	21
1	D1S53	CRI-L673-M	RS	S	44(0.34)	223	21
1	D1S54	CRI-R117-M	RS	S	32(0.27)	204	21
1	D1S55	CRI-L589-E	RS	S	46(0.36)	172	21
1	D1S56	CRI-C52-E	RS	S	65(0.58)	191	21
1	D1S57	pYNZ2-T	RS	S	65(0.57)	579	22
1	D1S58	pYNZ23-M	RS	S	50(0.37)	367	23
1	D1S59	pHHH119-M	RS	S	39(0.32)	95	24
1	D1S61	pMLAJ1-Hf	RS	S	74(0.69)	268	25
1	D1S62	pTH154-Pv	RS	S	50(0.37)	323	26
1	D1S63	pCMM8-E	RS	S	64(0.57)	442	27
1	D1S63	pCMM8.1-M	RS	S	38(0.31)	309	28
1	D1S64	pEFZ13-M	RS	S	45(0.35)	309	28
1	D1S65	pEKH7.4-T	RS	S	50(0.37)	484	29
1	D1S65	pEKH7.4-Bg	RS	S	48(0.37)	192	29
1	D1S66	pHB140-M	RS	S	41(0.33)	330	30
1	D1S67	pHHH106-M	RS	S	49(0.37)	465	30
1q32-q44	D1S68	CRI-L1199-M	RU	S	79(0.76)	380	21; 31
1	D1S69	CRI-L501-T	RS	S	71(0.66)	170	21
1	D1S70	CRI-L461-T	RS	S	43(0.34)	217	21
1	D1S71	CRI-L1039-M	RS	S	47(0.36)	146	21
1	D1S73	pEDF53.2-T	RU	S	49(0.37)	256	25
1	D1S74	cYNA13-M	RS	S	84(0.81)	748	25
1	D1S76	pCMM12.1-T	RS	S	65(0.58)	257	27
1	D1S77	pMCT58-Pv	RS	S	66(0.60)	330	32
1	D1S80	pMCT118-Pv	RS	S	63(0.56)	245	33
1	D1S81	pTHH33R	RS	S	74(0.69)	515	34
1	D1S84	NL32-M	RS	S	44(0.34)	312	35
1	D1S85	VC85-StuI	RS	S	47(0.36)	256	36

Table 1. (continued)

Location	Locus	System-enz	Pm type	AM	HET% (PIC)	NIM	Citations
1	D1S86	VC64-T	RS	S	34(0.28)	220	37
1	D1S91	CRI-C90-H	RS	S	33(0.28)	106	21
1	D1S102	Mfd52	CA	P	59(0.52)	372	38
1	D1S103	Mfd64	CA	P	73(0.68)	470	38
1	D1S104	Mfd67	CA	P	71(0.66)	467	39
1p36.3	D1Z2	p1-79-P	RS	S	44(0.34)	68	40; 40
1p36.3	D1Z2	pYNI10-T	RU	S	70(0.64)	216	41; 40
1cen	D1Z5	pSD1-1-X	RS	S	72(0.67)	346	42; 42
1q32	DAF	DAF-T-H	RS	S	33(0.28)	201	13; 14
1q32	DAF	DAF-H-H	RS	S	48(0.37)	336	13; 14
1pter-p36	ERPL1	HLM2-P	RS	S	45(0.39)	90	43; 44
1q31-q32.1	F13B	NA	PP	N	43(0.39)	258	25; 45
1q31-q32.1	F13B	F13b-M	RU	N	12(0.11)	83	46; 45
1p22-p21	F3	AP8-M	RS	S	40(0.32)	157	47; 48
1p36.2-p36.1	FGR	pB8-E	RS	S	49(0.37)	326	49; 50
1p35-p34	FUCA1	af-3-BglI	RS	S	49(0.37)	192	51; 52
1p35-p34	FUCA1	af-3-Pv	RS	S	43(0.34)	290	51; 52
1p35-p31.3	GLUT1	gt2-2-X	RS	S	43(0.34)	276	2; 53
1p31	GSTM1	hgst-T-H	RS	S	34(0.28)	121	54; 55
1p31	GSTM1	hgst-B-H	RS	S	50(0.37)	118	54; 55
1p36.1-p35	HMG17	HMG-17-P	RS	S	14(0.13)	70	56; 57
1q31	LAMB2	pLamB2-M	RS	S	49(0.37)	323	58; 45
1q21-q23	MUC1	PUM24P-Hf	RS	S	72(0.67)	321	59; 59
1q21-q23	MUC1	pMUC10-R	RS	S	81(0.79)	617	59; 59
1q21-q23	MUC1	pMUC10-Hf	RS	S	72(0.66)	437	59; 59
1p32	MYCL1	mycl-E	RS	S	50(0.37)	283	60; 61
1p13	NGFB	N8C6-Hc	RS	S	9(0.09)	54	62; 63
1p13	NGFB	N8C6-T	RS	S	24(0.21)	154	4; 63
1p13	NGFB	N8C6-Bg	RS	S	32(0.27)	220	62; 63
1p13	NRAS	pMCR3-E	RS	S	39(0.32)	312	64; 65
1p31-p22	PGM1	NA	PP	N	52(0.47)	345	25; 66
1p36	PND	pJA110-Bg	RS	S	23(0.20)	150	67; 68
1p36	PND	pJA110-T	RS	S	16(0.15)	54	67; 68
1q32	REN	pHRnES1.9-H	RS	S	41(0.32)	367	25; 69
1q32	REN	pHRnX3.6-T	RS	S	41(0.33)	73	25; 69
1q32	REN	Ren2-Bg	RS	S	42(0.33)	241	70; 69
1p36.2-p34	RH	NA	PP	N	61(0.53)	435	25; 71
1q25-q43	SNRPE	SnRNP-M	RS	S	22(0.20)	112	72; 73
1q21	SPTA1	pHaSp5-Hc	RS	S	40(0.33)	90	74; 75
1q21	SPTA1	3021E1-Pv	RS	S	50(0.37)	214	74; 75
1q21	SPTA1	3021E1-M	RS	S	49(0.37)	264	74; 75
1p13	TSHB	p1.8-Hf	RS	S	50(0.37)	282	76; 77
1p13	TSHB	p2.3-H	RS	S	35(0.29)	193	76; 77
1p13	TSHB	p3.6-T	RS	S	11(0.11)	64	76; 77
2pter-p25	ACP1	ACP1	PP	N	44(0.34)	145	1; 2
2	ADRA2B	sRA-2	GGC	P	44(0.34)	81	3
2pter-p23	APOB	pB8-E	RU	S	21(0.19)	103	1; 4
2pter-p23	APOB	pB23-X	RU	S	48(0.36)	134	1
2	CALM	CALMOD-H	RU	S	46(0.35)	180	5
2p12	CD8A	pcDLeu2-14-Dr	RU	S	38(0.30)	148	6; 7
2p12	CD8A	Leu-2/T8	AC	P	73(0.69)	86	8; 7
2q14-q32	COL5A2	DMC2-M	RU	S	22(0.20)	37	9; 10
2	CPS1	CPS1-Bg	RU	S	50(0.43)	263	11
2q33-q36	CRYG	sRA-4	AAC	P	65(0.58)	93	3; 12
2q33-q36	CRYGP1	1p5G1-T	RU	S	44(0.34)	212	1; 12
2q33-q36	CRYGP1	2p5G1-T	RU	S	44(0.34)	227	1; 12
2q33-q36	CRYGP1	3p5G1-T	RU	S	30(0.26)	143	1; 12
2q33-q36	CRYGP1	p5G1-M	RU	S	40(0.32)	79	13; 12
2q33	CTLA4	sRA-3	TA	P	61(0.58)	84	3; 14
2qtel	D2F69S1	HTY275c24-E2	RU	S	61(0.53)	231	3; 3
2qtel	D2F69S1	HTY275c24-H1	RU	S	61(0.54)	302	3; 3
2qtel	D2F69S1	HTY275c24-M	RU	S	65(0.58)	267	3; 3
2pter-p23	D2S1	L2.30-Bg	RU	S	48(0.36)	181	15; 15
2pter-p23	D2S1	L2.30-M	RU	S	47(0.36)	148	15; 15
2q35-qter	D2S3	p5.1-25-P	RV	S	52(0.45)	173	1; 16
2p16-p15	D2S5	IMR32-6-E	RU	S	41(0.33)	48	17; 18
2p16-p15	D2S5	IMR32-6-M	RS	S	41(0.33)	116	17; 18
2	D2S6	pXG-18-T	RU	S	50(0.37)	342	19
2	D2S16	E28-T	RU	S	33(0.31)	156	20
2	D2S17	E88-E	RU	S	35(0.29)	268	21
2	D2S19	CRI-L301-T	RU	S	48(0.37)	155	13
2	D2S20	CRI-L34-M	RU	S	48(0.41)	146	13
2	D2S21	CRI-L22-T	RU	S	85(0.84)	229	13
2	D2S22	CRI-C84-E	RU	S	47(0.36)	160	13
2	D2S23	CRI-C43-E	RU	S	23(0.20)	69	13
2	D2S24	CRI-C36-E	RU	S	48(0.37)	122	13

Table 1. (continued)

Location	Locus	System-enz	Pm type	AM	HET% (PIC)	NIM	Citations
2	D2S25	CRI-C13B-P	RU	S	86(0.85)	228	13
2	D2S26	CRI-R322-Bg	RU	S	50(0.37)	39	13
2	D2S27	CRI-R221-T	RU	S	77(0.74)	139	13
2	D2S28	CRI-R40-2-Bg	RU	S	46(0.41)	120	13
2	D2S29	CRI-R4-T	RU	S	21(0.20)	20	13
2	D2S30	CRI-P166-M	RU	S	79(0.76)	217	13
2	D2S31	CRI-P40-E	RU	S	50(0.37)	153	13
2	D2S32	CRI-P20-Bg	RU	S	29(0.25)	71	13
2	D2S33	CRI-L1287-M	RU	S	24(0.21)	69	13
2	D2S34	CRI-L1247-M	RU	S	50(0.38)	172	13
2	D2S35	CRI-L1229-T	RU	S	74(0.70)	185	13
2	D2S36	CRI-L1202-T	RU	S	36(0.30)	85	13
2	D2S37	CRI-L750-T	RU	S	27(0.23)	78	13
2	D2S38	CRI-L625-T	RU	S	54(0.48)	166	13
2	D2S39	CRI-L625-M	RU	S	51(0.46)	141	13
2	D2S40	CRI-L523-R	RU	S	50(0.37)	120	13
2	D2S41	CRI-L452-Bg	RU	S	68(0.64)	181	13
2	D2S42	CRI-L379-M	RU	S	38(0.31)	63	13
2	D2S43	pYNZ15-T	RU	S	50(0.37)	306	1
2	D2S44	pYNH24-M	RV	S	84(0.81)	406	1
2	D2S45	pHHH133-M	RU	S	42(0.33)	126	1
2	D2S46	pYNZ9.1-T	RU	S	49(0.37)	197	1
2	D2S47	pTAB5-7-Pv	RV	S	74(0.69)	301	1
2	D2S48	pEFD122-M	RU	S	50(0.37)	228	1
2	D2S49	pYNA15.1-M	RU	S	43(0.34)	220	1
2	D2S50	cYNA4-M	RV	S	78(0.74)	410	1
2	D2S51	pCMM63-M	RU	S	18(0.17)	112	1
2	D2S53	cMCOE32-T	RV	S	68(0.62)	406	1
2	D2S54	1pHHH115-M	RU	S	27(0.24)	118	1
2	D2S55	2pHHH115-M	RU	S	50(0.37)	185	1
2	D2S56	pEKZ105-R	RU	S	50(0.37)	240	22
2	D2S57	pLambdaP2-R	RU	S	43(0.34)	82	23
2	D2S58	Mfd19	AC	P	59*(0.57*)	45	26
2	D2S72	Mfd36	AC	P	79(0.75)	351	27
2	D2S73	Mfd54	CA	P	60(0.54)	52	28
2	D2S70	p2.1-H	RU	S	42(0.33)	159	1
2	D2S70	Mfd128	CA	P	43(0.34)	82	23
2	D2S71	Mfd115	CA	P	76(0.73)	115	30
2	D2S72	Mfd128	CA	P	81(0.79)	73	28
2	D2S73	Mfd145	TG	P	70(0.64)	68	28
2	D2S105	Mfd156	AC	P	69(0.66)	339	3; 28
2	D2S97	MIT-MS211	GT	P	72(0.69)	91	30
2	D2S98	MIT-MS22	CA	P	89(0.87)	112	30
2	D2S99	MIT-F6	TG	P	86(0.85)	84	30
2	D2S100	MIT-MH105	CA	P	76(0.73)	115	30
2	D2S101	Mfd115	CA	P	76(0.72)	84	28
2	D2S102	Mfd128	CA	P	81(0.79)	73	28
2	D2S103	Mfd145	TG	P	70(0.64)	68	28
2	D2S104	Mfd149	AC	P	69(0.66)	339	3; 28
2	D2S105	Mfd156	AC	P	65(0.62)	46	28
2	D2S106	GCG	GA	P	78(0.74)	78	31; 32
2	D2S107	Glucagon	GA	P	78(0.74)	78	31; 32
2	D2S108	pGCF22-T	RU	S	47(0.36)	121	23; 33
2	D2S109	IL1A	CA	P	66(0.58)	74	28; 34
2	D2S110	Mfd68	CA	P	66(0.58)	74	28; 34
2	D2S111	LCT	RU	S	36(0.30)	151	23; 35
2	D2S112	Ica-T	RU	S	36(0.30)	151	23; 35
2	D2S113	pLPH5-M	RU	S	36(0.29)	170	36
2	D2S114	TGFα	RU	S	10(0.10)	46	37; 38
2	D2S115	tgfα925-B	RU	S	19(0.17)	80	37; 38
2	D2S116	tgfα925-T	RU	S	19(0.17)	80	37; 38
2	D2S117	SRA-1	Tet	P	67(0.61)	149	39; 40
2	D2S118	TPO	RV	S	73(0.69)	232	5; 40
2	D2S119	TPOe10-X	RV	S	58(0.49)	239	5; 40
2	D2S120	TPOe17-Bg	RV	S	58(0.49)	239	5; 40
2	D2S21	ACPP	Tet	P	61(0.56)	407	1; 2
2	D2S21	3p21	RU	S	47(0.36)	282	3; 4
2	D2S22	D3S6	PS	P	15(0.14)	317	5; 6
2	D2S23	D3S13	RS	S	67(NA)	245	7
2	D2S24	D3S18	RU	S	NA(NA)	180	7
2	D2S25	D3S18	RU	S	NA(NA)	249	8
2	D2S26	D3S20	RU	S	74(NA)	252	7
2	D2S27	D3S22	RU	S	62(NA)	191	7
2	D2S28	D3S30	RU	S	49(0.37)	271	9; 9
2	D2S29	D3S32</td					

Table 1. (continued)

Location	Locus	System-enz	Pm type	HET% (PIC)	NIM	Citations
3	D3S196	Mfd17	CA P	NA(0.68)	399	12
3p25-p24.2	D3S266	not65	CA P	72(NA)	376	13; 14
3p21.33-p21.32	D3S643	cCI3-9-Pv	RV S	43(NA)	240	15; 16
3p23	D3S647	cCI3-245-Bg	RS S	44(0.34)	253	15; 16
3p25.1	D3S656	cCI3-326-Bg	RS S	49(0.37)	209	15; 16
3p13-p12.3	D3S672	cCI3-315-B	RS S	15(0.13)	329	15; 16
3p22.3-p21.33	D3S685	cCI3-515-M	RS S	NA(NA)	317	15; 16
3p21.33	D3S686	cCI3-524-T	RS S	51(0.45)	217	15; 16
3pter-p24.2	D3S687	cCI3-528-M	RS S	49(0.37)	300	16; 16
3pter-p24.2	D3S687	cCI3-528-T	RS S	15(0.14)	300	16; 16
3p13	D3S693	cCI3-570-T	RS S	28(0.24)	227	15; 16
3q26.3-q27.3	D3S704	cCI-602-Pv	RS S	50(0.38)	282	15; 16
3q23	D3S706	cCI3-607-T	RS S	49(0.37)	337	15; 16
3p21.2-p21.1	D3S709	cCI3-612-R	RS S	15(0.14)	243	15; 16
3	D3S849	cCI3-206-Pv	RS S	44(0.34)	223	16
3p25.1	D3S856	cCI3-326-Bg	RS S	49(0.37)	209	15; 16
3	D3S858	cCI3-343-T	RS S	50(0.38)	324	16
3	D3S863	cCI3-358-M	RS S	44(0.34)	162	16
3	D3S867	cCI3-377-T	RS S	44(0.34)	202	16
3	D3S907	cCI3-556-Bg	RS S	15(0.14)	194	16
3	D3S908	cCI3-563-M	RS S	38(0.30)	182	16
3p21.1	D3S936	cCI3-721-M	RS S	50(0.38)	216	17; 16
3q29-qter	D3S944	cCI3-735-T	RV S	50(NA)	208	17; 16
3q27.3	D3S964	cCI-767-M	RS S	44(0.34)	287	17; 16
3pter-p21	D3S1100	3GTa8	CA P	77(0.73)	409	18; 18
3q21-qter	D3S1206	LA153	CA P	62(0.57)	346	18; 18
3p21	D3S1210	MIT-MS140	CA P	76(0.60)	360	19; 1
3pter-p21	D3S1211	MIT-1106	CA P	80(0.77)	437	19; 19
3cen-q21	D3S1215	MIT-MS207	CA P	80(0.77)	374	19; 1
3p21	D3S1217	MIT-F8	CA P	81(0.78)	338	19; 1
3q21-qter	D3S1232	Mfd16	CA P	75(0.77)	434	20; 20
3	D3S1233	Mfd53	CA P	45(NA)	300	20
3q21-qter	D3S1237	Mfd124	CA P	76(NA)	435	20; 20
3	D3S1238	Mfd125	CA P	78(0.74)	420	20
3q26	GLUT2	GLUT2	CA P	76(0.72)	213	21; 22
3p25	RAF1	p627-T	RS S	NA(0.31)	190	23; 24
3p25	RAF1	p627-BglI	RS S	NA(0.37)	328	23; 24
3q21-q24	RHO	Mfd2	CA P	NA(0.30)	270	25; 26
3q28	SST	Mfd4	CA P	NA(0.45)	244	25; 27
3p24	THR8	pBH302-H	RS S	58(0.34)	342	28; 29
3	#28	RS S	47(NA)	311	30	
3	cCI3-1329	RS S	50(NA)	314	30	
3p25-p24.2	R7K1-6#110	CA P	80(0.77)	417	13; 13	
4q21-q23	ADH3	pAD74	RH S	35(0.32)	233	1; 2
4q11-q13	ALB	F47	RS S	53(0.57)	325	1; 3
4	ANT1	ANT	CA P	19(0.27)	89	4
4	ANX2P1	LPC2A,pNL-S	RS S	12(0.19)	75	5
4	ANX5	enx2	RH S	45(0.40)	240	6
4	AREG	AR9	RH S	36(0.33)	198	7
4	ATP1BL1	B51-1-4	RH S	43(0.38)	210	8
4	CCM1	pCycA	RS S	39(0.35)	200	9
4	D4F26S1	pBS847	RH S	51(0.38)	283	10
4q11-q21	D4S1	3.6	RS S	56(0.36)	389	11; 12
4pter-16.3	D4S10	G8	RH S	74(0.55)	542	11; 12
4	D4S12	A1-Ha	RS S	14(0.18)	65	13
4	D4S13	A46-M	RS S	28(0.32)	170	11
4p11-q11	D4S35	g920	RS S	58(0.52)	351	11; 12
4	D4S43	D4S43	RH S	68(0.55)	328	14
4	D4S62	p8-Hc	RS S	28(0.44)	121	15
4	D4S67	4cen-H	RS S	51(0.37)	258	16
4pter-16.3	D4S90	D5	RH S	55(0.47)	354	11; 17
4	D4S95	pBS674	RH S	63(0.50)	472	18
4	D4S96	pBS678	RH S	46(0.36)	426	18
4	D4S98	pBS731	RH S	25(0.58)	141	18
4	D4S101	CRI-R227-E,T	RH S	76(0.57)	260	19
4	D4S109	CRI-L9-H	RS S	40(0.30)	116	19
4	D4S111	157-9-P	RS S	16(0.25)	99	20
4	D4S115	252-3	RH S	40(0.44)	215	21
4	D4S118	CRI-C82-M	RS S	23(0.26)	125	19
4	D4S119	CRI-L231-M	RS S	19(0.21)	64	19
4	D4S120	CRI-L527-T	RS S	43(0.35)	159	19
4	D4S121	CRI-R622-T	RS S	28(0.21)	70	19
4	D4S123	pIBS17	RH S	33(0.37)	263	22
4	D4S124	pMCOC14-P	RS S	21(0.23)	152	23
4pter-16.3	D4S125	pYNZ32	RV S	52(0.53)	424	11; 24
4pter-16.3	D4S126	p309	RV S	58(0.52)	334	11; 24

Table 1. (continued)

Location	Locus	System-enz	Pm type	HET% (PIC)	NIM	Citations
4q35-qter	D4S139	pH30	RV S	83(0.57)	759	11; 5
4	D4S144	pIRM19-1	RH S	55(0.47)	342	11
4pter-p11	D4S145	LE24-T	RS S	42(0.36)	404	11; 5
4q35-qter	D4S163	EFD139	RV S	80(0.57)	691	11; 5
4q35-qter	D4S171	Mfd22	CA P	69(0.56)	600	5; 5
4p15-q21	D4S172	pYX1-11	RH S	48(0.37)	185	5; 5
4	D4S173	pYX1-23-T	RS S	51(0.33)	138	25
4p15-p11	D4S174	Mfd59	CA P	82(0.57)	731	5; 5
4p15-q21	D4S175	Mfd38	CA P	79(0.57)	700	5; 5
4p16.2	D4S179	Mfd83	CA P	18(0.37)	160	5; 5
4q35-qter	D4S187	SBU10	SSC P	49(0.46)	465	5; 5
4p14-q21	D4S189	Mfd74	CA P	16(0.27)	52	5; 5
4p14-q21	D4S190	Mfd106	CA P	16(0.17)	50	5; 5
4q25-q31	D4S191	Mfd138	CA P	58(0.46)	507	5; 5
4q25-q34	D4S192	Mfd140	CA P	26(0.29)	200	5; 5
4q21-q25	D4S193	Mfd142	CA P	61(0.53)	583	5; 5
4q25-q34	D4S244	MIT-MH34	Tet P	75(0.61)	592	27; 28
4	D4S247	MIT-MS176	CA P	5(0.09)	39	27
4	D4Z1	F1,Xba-340-S	RS S	14(0.25)	78	11
4q25	EGF	EGF121	Tet P	68(0.55)	594	29; 30
4q25-q34	F11	FXI	RH S	19(0.33)	188	11; 31
4q28-q31	FABP2	NA	AAT P	62(0.50)	541	5; 32
4q28	FGA	NA	Tet P	43(0.44)	342	33; 34
4p13-p12	GABRB1	NA	Tet P	75(0.53)	380	11; 35
4q12-q13	GC	NA	PP N	64(0.53)	627	11; 36
4q28-q31	GRO1	MGSA,TC870-Sc	RS S	28(0.34)	123	37
4q28-q31	GYPA/GYPB	MNSs	PP N	67(0.59)	542	5; 38
4p16.1	H6	SSC P	28(0.24)	229	39; 39	
4pter-p16	HOX7	HOX7	CA P	60(0.51)	495	5; 40
4	HVBS6	PF19	RH S	36(0.38)	214	11
4q24-q25	IF	HI-1971-Bc	RS S	28(0.32)	134	11; 41
4	IL2	IL2-5-Kpn	RS S	7(0.06)	29	1
4q13-q21	IL8	pIL8-H	RS S	41(0.33)	328	11; 42
4q21	INP10	glFN31-7	RS S	58(0.50)	339	1; 43
4	KIT	vkit-mod-H	RS S	22(0.22)	127	44
4p11-q21	MT2P1	pMT2	RH S	45(0.35)	450	11; 45
4	PF4	PF4-E	RS S	16(0.37)	83	46
4p16.1	RAF1P1	RAF2	RH S	54(0.41)	420	11; 47
4	SP1	OP10-Bg	RS S	18(0.15)	156	48
4	UCP	HUCP-Bc	RS S	22(0.22)	86	49
4	A101	CA P	27(0.35)	211	50; 28	
4	Mfd202	CA P	64(0.49)	162	51	
4	Mfd208	CA P	35(0.32)	78	51	
4	STS4-217	CA P	9(0.13)	72	52	
5q11.2-q13.3	D5S6	M4-B	RS S	59(0.52)	372	1; 2
5p13-p11	D5S21	J0110H-C-M	RS S	43(0.43)	251	3; 4
5q31.2-q35.1	D5S22	p213-205Ed-M	RS S	60(0.56)	528	5; 6
5q11.2-q13.3	D5S39	p105-153Ra-M	RU S	53(0.76)	343	5; 2
5q35-qter	D5S43	LMS8-Hf	RV S	88(NA)	517	7; 8
5p15.2	D5S47	CRI-L118-E,P	RH S	51(0.33)	308	9; 10
5pter-p15.3	D5S48	CRI-L23-M,R	RH S	68(0.71)	231	9; 10
5q21	D5S49	CRI-L372-M	RH S	54(0.57)	320	9; 10
5p21	D5S50	CRI-L540-P	RS S	66(0.62)	390	9; 10
5p21	D5S52	CRI-L1265-T	RS S	60(0.60)	279	9; 10
5p21	D5S56	CRI-C44-M	RU S	75(0.69)	286	9; 10
5q23.3	D5S58	CRI-R379-M	RU S	60(0.55)	312	9; 10
5p21.1	D5S59	CRI-L433-M,P	RU S	67(0.57)	204	9; 10
5p15.1	D5S60	CRI-R535-M	RU S	45(0.43)	244	9; 10
5p33.3-q34.1	D5S61	CRI-L45-M	RS S	67(0.60)	366	9; 10
5q11.2-q13.3	D5S63	CRI-L407-T	RS S	44(0.33)	237	9; 6
5	D5S64	CRI-T39-M	RS S	50(0.40)	236	9
5	D5S71	C11p11-T	RH S	31(0.27)	214	5
5q32	D5S72	CRI-P148-T	RS S	60(0.57)	221	9; 10
5	D5S73	CRI-L334-T	RH S	61(0.64)	190	9; 6
5	D5S76	L599-H-a-T	RH S	67(0.55)	405	5
5q11.2-q13.3	D5S78	p105-798Rb-M	RS S	58(0.37)	243	5; 2
5	D5S83	cYN5.120-T	RU S	56(0.37)	185	11
5	D5S84	cMC5.61-M,T	RU S	59(0.37)	211	5
5q14-q21	D5S85	cKK5.33-P,T	RU S	51(0.38)	294	11; 12
5p15.2-p15.1	D5S90	CRI-FL11-M	RS S	61(0.55)	305	13; 10
5pter-p15.2	D5S95	CRI-FA55-M	RS S	46(0.36)	295	13; 10
5q11.2-q13.3	D5S125	EF5.15-T	RU S	51(0.35)	330	14; 15

Table 1. (continued)

Location	Locus	System-enz	Pm type	AM	HET% (PIC)	NIM	Citations
5	D5S136	15A6-2Pv	RU	S	53(0.36)	399	14
5q31	D5S156	E5.21-Pv	RU	S	56(0.37)	363	14; 12
5q31	D5S166	MC5.13B-Pv	RU	S	54(0.37)	388	14; 12
5q32	D5S180	92.21-M	RU	S	45(0.37)	342	16; 12
5	D5S192	21.17-T	RU	S	51(0.37)	416	16
5	D5S196	1F12-T	RU	S	47(0.37)	409	16
5q34	D5S198	93.121-T	RU	S	74(NA)	535	16; 12
5p	D5S268	Alu62	GT	P	78(0.70)	488	17; 18
5	D5S386	MC5.141-M	RU	S	47(0.36)	384	19
5	D5S388	EF5.29-T	RU	S	45(0.37)	322	19
5	D5S389	MC5.157-M	RU	S	44(0.34)	363	19
5	D5S390	M5.12-E.3-T	RU	S	41(NA)	376	19
5q13	HEXB	pHEXB3T1.9-T	RS	S	4(0.04)	21	20; 21
5q13	HEXB	pHEXB-X-P	RS	S	21(0.19)	93	22; 21
5q13	HEXB	HEXB-Xm	RS	S	38(0.36)	185	23; 21
5q13	HEXB	HAP	RH	S	49(0.68)	254	24; 21
5p14-p13	HPRTP2	pL500-M	RU	S	41(0.29)	254	25; 25
6q23	ARG1	C16B-Pv	RU	S	26(0.23)	168	1; 2
6q13-q21	CGA	pCGalpha-E	RU	S	35(0.29)	45	3; 4
6q13-q21	CGA	pCGalpha-H	RU	S	46(0.35)	50	3; 4
6	D6F14S1	OL43-E	RU	S	22(0.20)	200	5
6p21-qter	D6S2	p2-2-Pv	RU	S	55(0.49)	221	6; 7
6p21	D6S4	4c11-Bg	RU	S	48(0.36)	448	8; 9
6p21	D6S5	pAGB6-M	RU	S	23(0.21)	170	10; 9
6	D6S7	p7H4-Er	RU	S	37(0.35)	233	11
6	D6S8	p2C5-M	RU	S	31(0.26)	324	11
6	D6S10	pCH6-T	RU	S	58(0.49)	450	12
6p21	D6S19	CRI-L171-M	RU	S	64(0.58)	201	13; 9
6p21	D6S19	CRI-L171-T	RU	S	50(0.39)	283	13; 9
6	D6S20	CRI-L320-M	RU	S	47(0.41)	129	13
6	D6S20	CRI-L320-T	RU	S	49(0.42)	37	13
6q27-qter	D6S21	CRI-L1065-R	RU	S	79(0.77)	243	13; 14
6	D6S22	CRI-L1077-T	RV	S	70(0.67)	152	13
6	D6S23	CRI-R368-M	RU	S	73(0.68)	258	13
6	D6S23	CRI-R368-T	RU	S	48(0.37)	137	13
6	D6S24	CRI-T18-R	RU	S	54(0.46)	48	13
6	D6S25	CRI-T22-H	RU	S	78(0.76)	53	13
6	D6S25	CRI-T22-T	RU	S	81(0.79)	32	13
6q14-q15	D6S26	CRI-L322-M	RU	S	57(0.50)	144	13; 14
6	D6S27	CRI-P74-P	RU	S	39(0.32)	127	13
6	D6S28	CRI-R125-H	RU	S	49(0.37)	122	13
6	D6S29	pHHH157-B	RU	S	50(0.37)	433	15
6	D6S30	pYNB3.6-M	RU	S	49(0.37)	420	16
6	D6S32	p3B10-M	RU	S	62(0.54)	368	17
6q21-qter	D6S33	CRI-L994-T	RU	S	35(0.29)	112	13; 14
6q27-qter	D6S37	pJC230-H	RV	S	62(0.54)	430	18; 14
6q27-qter	D6S39	pTHH5-H	RV	S	49(0.38)	490	19; 14
6	D6S41	pEFD6-Bg	RV	S	7(0.06)	49	19
6	D6S41	pEFD6-P	RV	S	33(0.28)	256	19
6	D6S42	H33-B	RU	S	35(0.29)	206	20
6	D6S42	H33-T	RU	S	27(0.26)	104	20
6q27-qter	D6S44	pYNZ132-T	RV	S	62(0.54)	542	21; 14
6q27-qter	D6S48	pMC0812-T	RV	S	68(0.63)	206	22; 14
6	D6S83	LILA-2-P	RU	S	65(0.58)	356	23
6	D6S88	p1-10-2-E	RU	S	50(0.37)	351	24
6p23	D6S89	XL25B	CA	P	87(0.85)	591	25; 26
6	D6S90	pHZ-71-Bc	RU	S	38(0.31)	201	27
6	D6S105	Mfd61	CA	P	81(0.79)	542	28
6	D6S107	R61B-Bc	RU	S	30(0.26)	126	29
6p	D6S109	15a/15b	GT	P	79(0.76)	493	30; 30
6	D6S132	CEB3-Hf	RV	S	75(0.70)	573	31; 31
6q27-qter	D6S133	CEB4-Hf	RV	S	75(0.70)	602	31; 31
6	D6S312	pEFD84-R	RU	S	8(0.08)	50	32
6cen	D6Z1	p308-B	RV	S	50(0.46)	193	33; 34
6cen	D6Z1	p308-T	RV	S	51(0.47)	214	33; 34
6q24-qter	ESR	M72-X	RU	S	44(0.34)	128	35; 36
6q24-qter	ESR	HG-S	RU	S	16(0.14)	29	37; 36
6pter-p24	F13A1	F13a1-B	RU	S	33(0.28)	193	11; 38
6pter-p24	F13A1	F13a2-B	RU	S	41(0.32)	276	11; 38
6pter-p24	F13A1	F13a3-Bc	RU	S	68(0.63)	340	11; 38
6pter-p24	F13A1	G25-H	RU	S	24(0.21)	122	11; 38
6p21.3-p21.1	GL01	GL01	PP	E	49(0.37)	438	39; 40
6p21.3	HLA-A	HLA-A	PP	H	72†(0.66†)	534	11; 41
6p21.3	HLA-B	HLA-B	PP	H	74†(0.70†)	615	11; 41
6p21.3	HLA-B	pDP001-Er	RU	S	21(0.19)	91	10; 41
6p21.3	HLA-C	HLA-C	PP	H	69†(0.63†)	329	11; 41

Table 1. (continued)

Location	Locus	System-enz	Pm type	AM	HET% (PIC)	NIM	Citations
6p21.3	6p21.3	6p21.3	RU	S	67(0.60)	289	42; 41
6p21.3	6p21.3	6p21.3	RU	S	42(0.37)	178	10; 41
6p21.3	6p21.3	6p21.3	RU	S	37(0.30)	168	10; 41
6p21.3	6p21.3	6p21.3	PP	H	70(0.64)	563	11; 41
6p21.3	6p21.3	6p21.3	RU	S	45(0.35)	165	43; 44
6p21.3	6p21.3	6p21.3	RU	S	52(0.41)	376	45; 46
6p21.3	6p21.3	6p21.3	RU	S	46(0.35)	229	47; 47
6p21.3	6p21.3	6p21.3	RU	S	39(0.31)	87	32; 48
6p21.3	6p21.3	6p21.3	RU	S	49(0.37)	499	49; 48
6p21.3	6p21.3	6p21.3	RU	S	44(0.34)	347	50; 51
6p21.3	6p21.3	6p21.3	RU	S	41(0.33)	57	9; 52
6p21.3	6p21.3	6p21.3	RU	S	41(0.32)	251	53; 54
6p21.3	6p21.3	6p21.3	RU	S	49(0.37)	147	55; 56
6p21.3	6p21.3	6p21.3	RU	S	32(0.27)	156	57; 58
6p21.3	6p21.3	6p21.3	RU	S	59(0.53)	385	57
6p21.3	6p21.3	6p21.3	RU	S	33(0.28)	202	57
6p21.3	6p21.3	6p21.3	GT	P	71(0.65)	424	59; 59
6p21.3	6p21.3	6p21.3	RU	S	49(0.37)	152	32
6q22-q24	BPGM	XMLE4-M	RU	S	27(0.23)	151	1; 2
6q22-q24	COL1A2	NJ3-E	RS	S	47(0.36)	193	3; 4
6q22-q24	COL1A2	sDCD1	GT	P	66(0.60)	300	5; 4
6q22-q24	CPA1	p184a-Bg	RU	S	43(0.34)	216	6; 7
6q22-q24	D7S1	pA2H3-H	RU	S	25(0.23)	96	8
6q22-q24	D7S8	pJ3.11-M	RU	S	46(0.35)	282	3; 9
6q22-q24	D7S8	pJ3.11-T	RU	S	6(0.06)	8	3; 9
6q22-q24	D7S10	pJ5.11-M	RU	S	47(0.36)	241	10
6q22-q24	D7S11	phage6-Bg	RU	S	26(0.22)	161	10
6q22-q24	D7S11	phage6-H	RU	S	35(0.29)	181	10
6q22-q24	D7S13	B79a-H	RU	S	31(0.26)	109	3; 11
6q22-q24	D7S13	B79a-M	RU	S	46(0.35)	198	3; 11
6q22-q24	D7S15	CRI-L917-Hc	RU	S	50(0.37)	190	12
6q22-q24	D7S15	CRI-L917-H	RS	S	42(0.33)	209	12
6q22-q24	D7S17	p7-26-X	RU	S	47(0.36)	177	10
6q22-q24	D7S18	p7C22-E	RU	S	28(0.24)	96	3; 11
6q22-q24	D7S21	LMS31-Hf	RV	S	75†(0.70†)	557	10; 13
6q22-q24	D7S22	pLg3-Hf	RV	S	75†(0.70†)	537	14; 13
6q22-q24	D7S22	14C2-Hf	RV	S	74(0.69)	470	15; 13
6q22-q24	D7S23	cKM19,CS.7	GT	P	72(0.69)	212	16
6q22-q24	D7S54	CRI-L281-M	RU	S	71(0.66)	292	12
6q22-q24	D7S54	CRI-L281-T	RU	S	74(0.69)	337	12
6q22-q24	D7S55	CRI-L390-Bg	RU	S	20(0.18)	60	10
6q22-q24	D7S56	CRI-L544-M	RU	S	50(0.38)	177	12
6q22-q24	D7S57	CRI-L751-M	RU	S	56(0.49)	249	10
6q22-q24	D7S58	CRI-L819-H	RS	S	49(0.37)	138	10
6q22-q24	D7S59	CRI-L887-M	RU	S	62(0.55)	305	12
6q22-q24	D7S61	CRI-L966-R	RU	S	80†(0.80†)	331	12
6q22-q24	D7S62	CRI-L1020-T	RU	S	67(0.61)	257	10
6q22-q24	D7S62	CRI-L1020-H	RS	S	42(0.33)	135	10
6q22-q24	D7S63	CRI-L1033-M	RU	S	50(0.37)	165	17
6q22-q24	D7S64	CRI-L1238-E	RS	S	45(0.35)	222	12
6q22-q24	D7S65	CRI-P137-T	RU	S	50(0.37)	206	10; 18
6q22-q24	D7S66	CRI-R12-M	RU	S	43(0.40)	102	10
6q22-q24	D7S67	CRI-R40-2-M	RU	S	50(0.37)	143	12
6q22-q24	D7S68	CRI-R53-Bg	RU	S	45(0.41)	122	12
6q22-q24	D7S68	CRI-R53-B	RU	S	26(0.23)	150	17
6q22-q24	D7S69	CRI-R944-M	RU	S	70(0.65)	139	10; 18
6q22-q24	D7S70	CRI-R967-M	RU	S	63(0.57)	282	12
6q22-q24	D7S71	CRI-S2-M	RU	S	44(0.34)	181	12
6q22-q24	D7S72	CRI-S3-H	RU	S	46(0.36)	255	12
6q22-q24	D7S73	CRI-S14-M</td					

Table 1. (continued)

Location	Locus	System-enz	Pm type	AM	HET% (PIC)	NIM	Citations
7	D7S89	CRI-S127-H	RU	S	61(0.53)	80	10
7	D7S89	CRI-S127-M	RU	S	67(0.59)	272	10
7	D7S90	CRI-S130-M	RU	S	48(0.37)	125	12
7	D7S91	CRI-S134-Hc	RU	S	49(0.37)	146	12
7	D7S92	CRI-S139-T	RU	S	68(0.64)	185	10
7	D7S93	CRI-S140-M	RU	S	48(0.37)	265	12
7	D7S94	CRI-S146-E	RU	S	38(0.30)	107	12
7	D7S95	CRI-S148-M	RU	S	50(0.38)	257	12
7	D7S96	CRI-S155-T	RS	S	28(0.24)	168	12
7	D7S97	CRI-S158-T	RU	S	34(0.28)	167	12
7	D7S98	CRI-S161-R	RU	S	38(0.30)	16	12
7	D7S98	CRI-S161-T	RU	S	50(0.37)	305	12
7	D7S99	CRI-S162-M	RU	S	44(0.34)	149	12
7	D7S100	CRI-S166-T	RU	S	50(0.38)	357	10
7	D7S101	CRI-S167-M	RU	S	26(0.23)	161	12
7	D7S102	CRI-S187-M	RU	S	38(0.30)	140	10
7	D7S103	CRI-S193-T	RS	S	50(0.42)	337	10
7q36-qter	D7S104	CRI-S194-P	RV	S	79(0.76)	405	17; 19
7	D7S105	CRI-S195-T	RU	S	49(0.37)	243	10
7	D7S106	CRI-S199-M	RU	S	36(0.33)	100	12
7	D7S107	CRI-S201-T	RU	S	50(0.37)	142	12
7	D7S108	CRI-S202-P	RU	S	30(0.26)	203	10
7p14-p13	D7S109	CRI-S207-H	RU	S	23(0.20)	68	10; 18
7	D7S110	CRI-S224-T	RS	S	36(0.30)	104	12
7	D7S111	CRI-S241-E	RU	S	71(0.66)	370	12
7p21-p15.2	D7S112	CRI-S244-T	RS	S	46(0.38)	329	10; 19
7q31-q32	D7S125	A37-P	RU	S	34(0.29)	145	3; 3
7q31-q32	D7S126	C33-H	RU	S	41(0.37)	104	3; 3
7cen-q22	D7S129	G16-E	RU	S	21(0.19)	44	3; 3
7p15.3-p15.1	D7S132	pTM60-T	RU	S	46(0.36)	185	3; 3
7pter-p15.1	D7S135	pTM102L-T	RU	S	45(0.35)	234	3; 3
7pter-p15.1	D7S149	pTS93-P	RU	S	40(0.32)	90	3; 3
7pter-p15.1	D7S150	pTS194-T	RU	S	36(0.30)	214	3; 3
7	D7S368	1pCMI37-R	RU	S	45(0.35)	231	3
7	D7S368	2pCMI37-R	RU	S	69(0.64)	302	3
7	D7S368	3pCMI37-R	RU	S	27(0.24)	89	3
7	D7S369	pADJ641-T	RU	S	32(0.27)	149	3
7	D7S370	pRM7.4-M	RU	S	48(0.36)	144	3
7	D7S371	pTHH28-M	RU	S	38(0.31)	65	3
7	D7S372	pYNB3.1R-R	RU	S	38(0.31)	166	3
7q34-qter	D7S392	M196-P	RU	S	21(0.18)	79	3; 3
7	D7S395	pHH232-Pv	RU	S	46(0.35)	123	3
7	D7S396	pJCZ67-M	RU	S	74(0.70)	348	3
7	D7S396	pJCZ67-R	RU	S	78(0.74)	242	3
7	D7S398	1pKKA12-M	RU	S	66(0.58)	134	20
7qtel	D7S427	HTY146c3-M	RU	S	92(0.91†)	538	17; 21
7qtel	D7S427	HTY146c30A-M	RU	S	45(0.35)	243	17; 21
7qtel	D7S427	HTY146c48-H1	RU	S	50(0.39)†	196	17; 21
7qtel	D7S427	HTY146c48-H2	RU	S	31(0.29)	80	17; 21
7qtel	D7S427	HTY146c48-H3	RU	S	44(0.39)	239	17; 21
7qtel	D7S427	HTY146c6-M	RU	S	43(0.34)	127	17; 21
7	D7S435	Mfd20	CA	P	69(0.63)	357	22
7	D7S440	Mfd50	CA	P	75(0.71)	306	22
7cen or q3	D7S448	IEF24.11-H	RU	S	50(0.37)	174	23; 23
7	D7S450	14C13	RV	S	72(0.67)	415	15
7	D7S461	MIT-MS97	CA	P	80(0.78)	85	24
7	D7S466	MIT-CQS43	GT	P	76(0.72)	342	24
7	D7S467	CEB13-Pv	RV	S	74(0.69)	580	25
7	D7S468	CEB16-Ha	RV	S	73(0.68)	506	26
7	D7S471	Mfd123	AC	P	80(0.77)	383	27
7	D7S472	Mfd172	AC	P	77(0.73)	104	27
7	D7S473	Mfd148	Cx	P	88(0.87)	99	27
7cen	D7Z2	pMGB7	R	N	NA(NA)	102	28; 29
7p12-p11.2	EGFR	EGFR-A64-P	RU	S	20(0.18)	133	10; 18
7p12-p11.2	EGFR	sAVH3	CA	P	72(0.67)	456	5; 18
7q36-qter	EN2	EN2-S	RU	S	18(0.17)	90	30; 31
7	ERV3	pHP1.7-M	RU	S	48(0.37)	187	3
7	GCK	3'GCK	CA	P	50(0.44)	295	10
7	GCK	5'GCK	CA	P	56(0.50)	186	32
7	GCK	3'+5' GCK-hap	PH	P	79(0.77)	NA	32
7p21	IL6/INF62	pBeta2.15-M	RU	S	50(0.37)	290	10; 33
7q31	MET	METD-T	RU	S	36(0.30)	185	3; 9
7q31	MET	METH-M	RU	S	52(0.43)	40	3; 9
7q31	MET	METH-T	RU	S	49(0.37)	253	3; 9
7q31	MET	pHOS6-T	RU	S	42(0.33)	198	3; 9
7q21	PGY3	MDR2-M	RU	S	30(0.27)	146	34; 35
7q21.3-q22	PLANH1	pPAI-E6.9-H	RU	S	49(0.37)	235	36; 36

Table 1. (continued)

Location	Locus	System-enz	Pm type	AM	HET% (PIC)	NIM	Citations
7q35	TCRB	pJ2-Bg	RU	S	49(0.37)	292	3; 37
7q35	TCRB	VB7-B	RU	S	54(0.48)	306	38; 37
7q35	TCRB	VB8-B	RU	S	50(0.37)	284	38; 37
7q35	TCRB	VB7-Er	RU	S	47(0.36)	127	38; 37
7q35	TCRG	PST/BAM-Pv	RU	S	30(0.25)	114	38; 37
7		pSRV1-T	RU	S	60(0.53)	262	3; 39
7		CEB24-Ha	RV	S	60(0.53)	99	40
8p11.2	ANK1	ANK1	CA	P	57(0.48)	342	1; 2
8q13-q22	CAIII	pCA15-T	RS	S	15(0.14)	100	3; 4
8ptel	D8F69S2	HTY275c24-1-B	RU	S	31(0.26)	141	5; 5
8ptel	D8F69S2	HTY275c24-2-H	RU	S	37(0.30)	176	5; 5
8	D8S2	182B-T	RS	S	47(0.37)	264	6
8pter-q11	D8S5	TL11-H	RS	S	39(0.31)	200	7; 8
8pter-q11	D8S5	TL11-St	RS	S	23(0.21)	146	9; 8
8pter-p23	D8S7	pSW50-H	RR	S	24(0.21)	61	10; 11
8pter-p23	D8S7	cos11E1pcr1	CA	P	28(0.24)	128	12; 11
8q13-q21.1	D8S8	EMBL3-287-T	RU	S	38(0.31)	289	13; 14
8q13-q21.1	D8S8	EMBL3-287-T	RU	S	7(0.06)	40	13; 14
8pter-p21.1	D8S17	pYNM3-P	RU	S	53(0.46)	139	15; 8
8	D8S19	pHHH171-M	RU	S	36(0.29)	164	15
8	D8S21	pABL4-2-R	RU	S	42(0.33)	183	15
8pter-p21.1	D8S22	CRI-V1225-E	RU	S	75(0.71)	200	16; 8
8q11-q22	D8S23	CRI-V822-E	RU	S	45(0.35)	181	16; 8
8	D8S24	CRI-U4-M	RU	S	35(0.32)	109	16
8pter-p21.1	D8S17	CRI-L370-M	RU	S	50(0.37)	169	16
8	D8S25	CRI-R191-M	RU	S	52(0.41)	217	16; 8
8	D8S26	CRI-R191-T	RU	S	49(0.45)	94	16; 8
8q22	D8S27	CRI-R150-H	RU	S	50(0.37)	137	16; 8
8	D8S28	CRI-L1427-T	RU	S	72(0.69)	134	16
8	D8S29	CRI-L251-M	RU	S	54(0.48)	207	16
8	D8S30	CRI-L1212-M	RU	S	25(0.22)	59	16
8	D8S31	CRI-L580-T	RU	S	49(0.37)	173	16
8	D8S32	CRI-L413-P	RU	S	66(0.60)	218	16
8	D8S33	CRI-L388-T	RU	S	45(0.35)	137	16
8q22-qter	D8S34	CRI-L186-T	RU	S	60(0.54)	174	16; 8
8	D8S35	CRI-L40-Bg	RU	S	46(0.35)	125	16
8	D8S36	CRI-C96-Bg	RU	S	75(0.70)	218	16
8	D8S39	pMCT128.2-P	RU	S	66(0.58)	43	17
8	D8S41	VC28-M	RU	S	50(0.37)	48	18
8	D8S62	CRI-L389-T	RU	S	32(0.27)	40	16
8	D8S73	CRI-C94-H	RU	S	40(0.35)	28	19
8	D8S84	Mfd8	CA	P	63(0.59)	348	20
8	D8S85	Mfd18	CA	P	75(0.70)	479	21
8	D8S87	Mfd39	CA	P	66(0.62)	388	21; 12
8	D8S88	Mfd45	CA	P	83(0.80)	457	21; 12
8	D8S131	Y19-B	RS	S	35(0.29)	126	22; 22
8	D8S133	cos24E10	CAx	P	75(0.72)	513	23; 12
8	D8S135	cos129E11	GA	P	15(0.15)	117	24
8	D8S136	140D4	CA	P	85(0.84)	462	25
8	D8S137	c171B10	CA	P	67(0.61)	406	12; 12
8	D8S139	CEB6-Ha	RU	S	48(0.44)	260	26; 26
8	D8S164	Mfd104	CA	P	78(0.75)	388	12; 12
8	D8S165	Mfd117	CA	P	51(0.48)	266	12; 12
8	D8S166	Mfd159	CA	P	84(0.82)	452	12; 12
8	D8S167	Mfd185A	CA	P	84(0.82)	531	12; 12
8	D8S169	CA	P	83(0.80)	476	12; 12	
8	D8S177	CA	P	82(0.80)	428	12; 12	
8	D8S200	Mfd196	CA	P	70(0.67)	428	12; 12
8	D8S201	Mfd199	CA	P	86(0.84)	479	12; 12
8	D8S211	CEB22-Ha	RU	S	23(0.22)	115	27
8	D8S287	LCAW3-(3,4)-M	RU	S	50(0.37)	55	28
8	D8S287	LCAW3-(5,6)-M	RU	S	47(0.36)	320	28
8	D8S287	LCAW3-(1,2)-M	RU	S	29(0.25)	170	28
8	D8S287	LCAW4-(1,2)-H	RU	S	50(0.37)	268	28
8	D8S287	LCAW4-(1,2)-T	RU	S	48(0.36)	143	28
8	D8S287	LCAW5-(1,2)-M	RU	S	48(0.36)	171	28
8	D8S287	LCAW5-(5,6)-M	RU	S	46(0.35)	168	28
8	GPT	GPT	PP	E	50(0.37)	147	15; 29
8	LPL	LPL35-H	RU	S	45(0.34)	172	30; 30
8	LPL	GZ-14,15	Tet	P	69(0.63)	408	31; 30
8	LPL	LPL3GT	CA	P	83(0.81)	525	32; 30
8	LPL5GT	CA	P	52(0.4			

Table 1. (continued)

Location	Locus	System-enz	Pm	HET%	NIM	Citations
			type	AM	(PIC)	
8cen-q13	PENK	Mfd31	CA	P	53(0.42)	312 36; 12
8p12-q11.2	PLAT	TPA1	CA	P	77(0.74)	378 37; 38
8p12-q11.2	PLAT	pCGE217-Hc	RU	S	43(0.34)	89 16; 38
8p12-q11.2	PLAT	pCGE217-P	RU	S	42(0.33)	49 16; 38
8p12-q11.2	PLAT	ptPA-4352-E	RS	S	46(0.35)	179 39; 38
8p12-p11	POLB	Bpol-B	RU	S	38(0.30)	12 40; 41
8p12-p11	POLB	Bpol-Ss	RU	S	38(0.30)	50 42; 41
8q24-qter	TG	pCHT16-8.0-T	RU	S	31(0.26)	200 15; 43
8q24-qter	TG	pCHT16-8-T	RU	S	29(0.25)	134 15; 43
8		730-T	RU	S	6(0.06)	31 44
8		pSRV21-Bs	RU	S	42(0.33)	78 45
9q34.1	ABL1	p2D	CA	P	58(0.54)	377 1; 2
9	ABO	NA	PP	N	44(0.40)	266 3
9q34.1	AK1	NA	PP	N	10(0.10)	69 4; 5
9q34-qter	ASS	ASSg1	CA	P	78(0.75)	438 6; 7
9q11-q22	ASSP3	pAS-1-H	RS	S	43(0.38)	291 8; 8
9pter-q11	D9S1	pHF12-8-T	RS	S	36(0.33)	296 9; 10
9p21	D9S3	DR6-H	RS	S	43(0.37)	277 11; 12
9	D9S7	pEFD126.3-Hf	RV	S	75(0.70)	556 13
9	D9S8	pEFD40.3-M	RU	S	37(0.33)	326 13
9	D9S9	pEKZ130.3-M	RV	S	36(0.33)	194 13
9q34.3-qter	D9S10	pMCT136-P	RV	S	50(0.44)	485 13; 14
9	D9S11	pMHZ10-Hf	RV	S	70(0.65)	476 13
9q22.3	D9S12	T512	CA	P	75(0.70)	125 15; 15
9	D9S13	pMHZ13-Pv	RV	S	55(0.49)	209 13
9	D9S14	pMCT96.1-R	RV	S	35(0.33)	185 13
9q13-q21.1	D9S15	mct112	CA	P	70(0.65)	467 16; 17
9q32	D9S16	pMCOA12-T	RU	S	49(0.45)	280 13; 14
9	D9S17	pEKZ19.3-T	RV	S	40(0.33)	343 13
9pter-p13	D9S18	pHHH220-T	RV	S	32(0.30)	244 13; 17
9p21	D9S19	CRI-L1263-T	RS	S	64(0.59)	206 9; 12
9	D9S20	CRI-R3-E	RS	S	52(0.46)	161 9
9	D9S21	CRI-P111-E	RS	S	57(0.52)	179 9
9	D9S22	CRI-P110-E	RS	S	33(0.29)	161 9
9	D9S23	CRI-L1424-H	RS	S	47(0.40)	148 9
9	D9S25	CRI-L1022-P	RS	S	28(0.27)	98 9
9	D9S26	CRI-P659-T	RS	S	45(0.37)	147 9
9	D9S30	pMHZ21-P	RU	S	49(0.40)	133 18
9	D9S31	pKKA40-Pv	RV	S	44(0.37)	304 13
9	D9S33	CRI-P944-T	RS	S	45(0.39)	154 9
9q13	D9S39	pFF9.59.1-M	RS	S	28(0.27)	155 19; 19
9q31-q33	D9S41	H35-T	RS	S	43(0.39)	260 20; 21
9p22-qter	D9S43	Mfd14	CA	P	79(0.76)	465 22; 23
9q13-q21.1	D9S48	pMCT7-P	RU	S	49(0.43)	173 13; 17
9	D9S49	p33.1-Hf	RV	S	60(0.54)	396 24
9p22-qter	D9S50	Mfd85	CA	P	49(0.44)	272 23; 23
9p22-qter	D9S51	Mfd94	CA	P	84(0.82)	94 23; 23
9p22-qter	D9S52	Mfd110	Tet	P	44(0.40)	251 23; 23
9p22-qter	D9S53	Mfd135	CA	P	86(0.84)	503 23; 23
9pter-p22	D9S54	Mfd141	CA	P	60(0.54)	341 23; 23
9q22.3-q31	D9S58	c3b2	CA	P	89(0.88)	601 25; 25
9q33-q34.1	D9S60	1627	CA	P	86(0.85)	585 25; 25
9q33-q34.1	D9S65	6873	CA	P	78(0.76)	517 25; 25
9qter	D9S66	5964	CA	P	81(0.80)	555 25; 25
9q34-qter	D9S67	2942	CA	P	72(0.69)	482 25; 25
9q34-qter	D9S103	Mfd77	CA	P	56(0.49)	150 23; 23
9p22-qter	D9S104	Mfd121	CA	P	82(0.80)	400 23; 23
9p22-qter	D9S105	Mfd178	CA	P	77(0.73)	74 23; 23
9q31	D9S109	a28	CA	P	82(0.79)	233 26; 26
9p21	D9S126	C72-H	RS	S	60(0.55)	352 12; 12
9q31	D9S127	a10	CA	P	71(0.63)	76 26; 26
9	D9S134	CEB23-Ha	RU	S	69(0.64)	380 27
9	D9S151	rsb2	SC	P	81(0.78)	283 28
9q34-qter	DBH	dbh	CA	P	81(0.78)	378 29; 30
9q33	GSN	D3d	CA	P	70(0.67)	427 1; 31
9q32-qter	HXB	p33.1	CA	P	78(0.75)	491 32; 33
9p22	IFNB1	IFNB-Bn	RS	S	44(0.36)	217 34; 34
9q32-q33.1	ORM	NA	PP	N	58(0.54)	402 35; 36

Table 1. (continued)

Location	Locus	System-enz	Pm	HET%	NIM	Citations	
			type	AM	(PIC)		
10q11.2	D10S9	CRI-L941-M	RU	S	46(0.35)	118 4	
10	D10S10	CRI-L893-E	RU	S	40(0.32)	136 4	
10q11.2	D10S11	CRI-L647-T	RU	S	48(0.45)	148 4; 4	
10q11.2	D10S11	CRI-CS931-T	RU	S	39(0.31)	159 4; 4	
10q11.2	D10S11	CRI-CS932-H	RU	S	43(0.34)	241 4; 4	
10q11.2	D10S11	CRI-CS933-B	RU	S	69(0.63)	86 4; 4	
10q11.2	D10S11	CRI-CS933-T	RU	S	63(0.59)	104 4; 4	
10	D10S12	CRI-L368-H	RV	S	83(0.81)	280 4	
10	D10S13	pTHH105.1-Bg	RU	S	39(0.32)	217 3	
10	D10S14	pTHH54-M	RU	S	57(0.47)	416 3	
10	D10S15	pMCK2-R	RV	S	35(0.34)	263 3	
10	D10S16	pCMM17.1-M	RU	S	46(0.35)	365 3	
10	D10S16	pCMM17.4-P	RU	S	30(0.26)	266 3	
10pter-p13	D10S17	pMHZ15-M	RU	S	48(0.36)	287 3; 1	
10	D10S18	pYNZ156-M	RU	S	32(0.27)	102 3	
10q21.1-q22	D10S19	pTB10.171-P	RU	S	45(0.35)	422 3; 1	
10	D10S20	OS-2-H	RU	S	57(0.48)	391 3	
10q21.1	D10S22	pTB10.163-M	RU	S	55(0.49)	445 3; 1	
10	D10S25	pEFD75-T	RV	S	73(0.69)	425 6	
10	D10S26	pEFD70.2-P	RV	S	68(0.62)	373 6	
10	D10S27	cTBQ4-M	RU	S	49(0.37)	402 6	
10pter-p13	D10S28	cTBQ7-T	RU	S	85(0.83)	534 6; 1	
10	D10S29	cTBQ12-T	RU	S	45(0.35)	335 6	
10	D10S30	cTBQ16-M	RU	S	44(0.34)	280 6	
10	D10S31	cTBQ20-M	RU	S	47(0.36)	318 6	
10	D10S32	cTB14.15-T	RU	S	61(0.53)	387 6	
10	D10S33	cTB14.16-R	RV	S	73(0.67)	339 6	
10pter-cen	D10S34	1cTB14.34-T	RU	S	48(0.37)	315 6; 1	
10pter-cen	D10S34	2cTB14.34-T	RU	S	49(0.37)	291 6; 1	
10pter-cen	D10S35	cTB14.36-M	RU	S	50(0.37)	302 6	
10	D10S36	pMCT122.2-T	RU	S	46(0.35)	234 6	
10q25.1	D10S37	H38-M	RU	S	49(0.37)	270 1; 1	
10pter-cen	D10S39	cmh10.2-Bg	RU	S	47(0.36)	176 1; 1	
10	D10S40	CRI-J90-M	RU	S	66(0.62)	174 4	
10	D10S41	CRI-J93-T	RU	S	66(0.59)	266 4	
10	D10S42	CRI-J97-B	RU	S	50(0.37)	147 4	
10	D10S43	CRI-J101-E	RU	S	34(0.28)	123 4	
10	D10S43	CRI-J101-H	RU	S	30(0.37)	152 4	
10	D10S44	CRI-J125-H	RU	S	49(0.37)	282 4	
10	D10S45	CRI-J127-H	RU	S	47(0.36)	244 4	
10	D10S46	CRI-J128-T	RU	S	38(0.30)	52 4	
10	D10S47	CRI-J137-E	RU	S	69(0.65)	125 4	
10	D10S48	CRI-J167-H	RU	S	46(0.36)	214 4	
10	D10S49	CRI-J170-P	RU	S	60(0.52)	334 4	
10	D10S50	CRI-J179-Bg	RU	S	38(0.30)	23 4	
10	D10S50	CRI-J179-Hc	RU	S	43(0.34)	103 4	
10	D10S50	CRI-J179-M	RU	S	50(0.37)	53 4	
10	D10S51	CRI-J182-E	RU	S	44(0.35)	19 4	
10	D10S51	CRI-J182-P	RU	S	46(0.40)	37 4	
10	D10S52	CRI-J193-Bg	RU	S	23(0.20)	90 4	
10	D10S53	CRI-J198-P	RU	S	67(0.63)	292 4	
10	D10S54	CRI-JC109-M	RU	S	62(0.55)	194 4	
10	D10S55	CRI-JC114-M	RU	S	49(0.37)	133 4	
10	D10S56	CRI-JC140-Bg	RU	S	41(0.33)	145 4	
10	D10S57	CRI-JC143-T	RU	S	48(0.36)	100 4	
10	D10S58	CRI-JC144A-M	RU	S	50(0.37)	170 4	
10	D10S58	CRI-JC144B-M	RU	S	44(0.34)	151 4	
10	D10S59	CRI-JC145-P	RU	S	47(0.41)	144 4	
10	D10S60	CRI-JC147-R	RU	S	49(0.37)	90 4	
10	D10S60	CRI-JS147	CA	P	77(0.74)	460 7	
10	D10S62	CRI-JM14-H	RU	S	58(0.51)	376 4	
10	D10S63	CRI-JD12-Bg	RU	S	48(0.42)	186 4; 4	
10q11.2-qter	D10S68	Mfd7	CA	P	49(0.46)	44 8; 8	
10q11.2-qter	D10S89	Mfd28	CA	P	73(0.69)	410 8; 8	
10q11.2-qter	D10S91	Mfd29	CA	P	69(0.64)	78 8; 8	
10q11.2-qter	D10S107	Mfd78	CA	P	57(0.49)	78 8; 8	
10q11.2-qter	D10S108	Mfd100	CA	P	60(0.57)	63 8; 8	
10q11.2-qter	D10S109	Mfd150	CA	P	76(0.73)	83 8; 8	
10q11.2-qter	D10S110	Mfd157	CA	P	56(0.51)	58 8; 8	
10q11.2-qter	D10S111	Mfd164	CA	P	71(0.66)	83 8; 8	
10	D10S112	CEB7-Ha	RU	S	55(0.50)	347 9	
10	D10S172	MIT-MX5	CA	P	70(0.65)	440 10	
10	D10S173	MIT-MX6C	CA	P	72(0.68)	373 10	
10	D10S174	MIT-MS88	CA	P	73(0.69)	444 10	
10q21.1	D10S180	CEB25-Ha	RV	S	75(0.70†)	554 9	
10	D10S182	EGR2	zap32-H	RU	S	10(0.10)	70 1; 11
10	D10S8	CRI-L1005-H	RU	S	31(0.26)	96 4	
10	D10S112	FNRB	pGEM1-32-Bn	RU	S	50(0.37)	275 12; 13

Table 1. (continued)

Location	Locus	System-enz	Pm type	HET% (PIC)	NIM	Citations
10pter-p14	IL2R	IL2R-BglII	RU S	10(0.09)	50	1; 14
10q26-qter	OAT	HOAT1-3-M	RU S	42(0.33)	172	1; 15
10q26-qter	OAT	HOAT1-5-M	RU S	32(0.27)	144	1; 15
10q24-qter	PLAU	pCGE194-Bg	RU S	46(0.35)	101	4; 16
10q11.2	RBP3	CRI-CS762-Hc	RU S	31(0.26)	152	4; 17
10q11.2	RBP3	CRI-CS762-T	RU S	37(0.30)	35	4; 17
10q11.2	RBP3	CRI-CS768-T	RU S	49(0.37)	102	4; 17
10q11.2	RBP3	CRI-CT19-M	RU S	79(0.77)	87	4; 17
10q11.2	RBP3	H4-Bg	RU S	20(0.18)	157	3; 17
10q11.2	RBP3	H4-M	RU S	40(0.32)	285	3; 17
10q11.2	RBP3	IRBP-P	RU S	47(0.36)	107	4; 17
10q11.2	RBP3	CTBIRBP9-T	RU S	47(0.36)	289	6; 17
10p13	VIM	hp411-Bc	RU S	40(0.32)	219	1; 18
10		2cMEN305-M	RU S	21(0.19)	120	19
10		BETA1-BglII	RU S	25(0.22)	189	19
10		cMEN-133-T	RU S	61(0.53)	237	19
10		cMEN-36-T	RU S	26(0.23)	110	19
10		cMEN527-T	RU S	64(0.56)	174	19
10		CRI-JS8001	CA P	58(0.52)	379	7
10		dry-5-1-T	RU S	28(0.24)	105	19
10		MEN-85-T	RU S	41(0.32)	142	19
10		MEN235-T	RU S	35(0.29)	223	19
10		pcMM14-T	RU S	47(0.40)	334	19
10		pMCT50-Pv	RU S	29(0.26)	202	19
10		SP-17-BstE/BstX	RU S	64(0.58)	180	19
10		SP-17-T	RU S	68(0.64)	307	19
11q23.3	APO	A1,A4,C3-many‡	RH S	81(NA†)	497	1; 2
11p15.2-p15.1	CALCA	pIT142-T	RS S	45(0.35)	268	3; 2
11q23.3	CD3D	Mfd69	CA P	75(0.71)	416	4; 2
11pter-p15.5	D11S12	ADJ762-Bc,M,T	RU S	67(0.43)	400	5; 6
11p13	D11S16	p32-1-M	RU S	57(0.57)	346	3; 2
11q23	D11S29	L7-T	RS S	33(0.28)	172	7; 7
11q23-qter	D11S34	ph2-11-M	RS S	39(0.36)	210	8; 9
11q22-q23	D11S35	phage2-22	CA P	84(0.79)	548	10; 9
11q24-qter	D11S83	ph2-25-M	RS S	54(0.36)	409	9; 2
11q22-q23	D11S84	p2-7-1D6-T	RS S	41(0.30)	288	8; 9
11q22-q23	D11S85	1phage6-3-M	RS S	45(0.37)	376	8; 9
11q13	D11S97	pmns51-T	RV S	76(0.76)	675	8; 2
11q22-q23	D11S98	phage9-11-M	RS S	43(0.37)	104	9; 9
11	D11S127	CRI-L605-M	RV S	58(0.45)	300	11
11	D11S129	CRI-R365-Bg	RV S	71(0.68)	157	11
11	D11S130	CRI-R397-R	RU S	62(0.56)	157	11
11	D11S131	CRI-R975-T	RS S	46(0.36)	171	11
11	D11S132	CRI-L424-E,H	RH S	68(0.47)	285	11
11	D11S133	CRI-L451-E,M	RH S	53(0.49)	139	11
11	D11S134	CRI-L834-M	RS S	50(0.36)	250	11
11	D11S136	CRI-L1382-M	RS S	63(0.37)	136	11
11	D11S137	CRI-R83-H,M,T	RH S	76(0.55)	265	11
11	D11S141	CRI-L762-T	RV S	45(0.52)	218	11
11	D11S142	CRI-V928-M	RS S	49(0.35)	144	11
11	D11S145	MCT117-M	RU S	56(0.49)	103	12; 2
11q12-q13.2	D11S146	pHBI59-M	RS S	44(0.35)	344	8; 2
11q23.3-q24	D11S147	HB118-M,P	RH S	70(0.44)	400	8; 13
11p12-p11.2	D11S149	pTHH26-Pv	RS S	26(0.20)	209	8; 2
11p13	D11S151	p56H2.4-P	RS S	35(0.29)	291	3; 2
11q23-qter	D11S286	ph8-10-B	RS S	35(0.32)	233	8; 14
11p12-p11.2	D11S288	p3C7-M	RS S	41(0.33)	345	8; 2
11p13	D11S324	p60H1.4-T	RS S	48(0.36)	385	2; 2
11	D11S350	2pHHH172-M	RS S	27(0.21)	223	8
11q23.1-q23.2	D11S351	CJ52.208M2-M	RS S	54(0.36)	143	8; 13
11q23.3	D11S382	pCJ52.12T1-T	RS S	30(0.24)	242	8; 13
11q25-qter	D11S383	CJ52.15-T	RS S	54(0.37)	292	8; 13
11	D11S384	CJ52.193-T	RS S	36(0.30)	151	8
11	D11S387	pCJ52.102T1-T	RS S	25(0.23)	137	8
11q14.3	D11S388	CJ52.4-M	RH S	84(NA†)	357	8; 13
11q13-q23	D11S389	pCJ52.99M2-M	RS S	33(0.30)	257	8; 2
11	D11S419	Mfd58	CA P	62(0.47)	401	4; 4
11q13.1	D11S429	cCl11-8-P	RS S	38(0.37)	219	15; 16
11	D11S424	pCJ52.77M1-M	RS S	38(0.31)	326	8
11q24-qter	D11S439	cCl11-36-M	RS S	45(0.37)	255	15; 15
11pter-p15.4	D11S454	cCl11-237-T	RV S	61(NA†)	348	15; 15
11p12-p11.2	D11S467	cCl11-282-T	RS S	31(0.26)	190	15; 15
11q23.3	D11S490	c1,16	CA P	83(NA†)	466	17; 18
11q13	D11S533	4F7	ACx P	89(NA†)	596	19; 20
11q23.3	D11S614	6d11	CA P	96(0.86)	357	21; 22
11	D11S836	Mfd108	CA P	69(0.62)	270	21; 21

Table 1. (continued)

Location	Locus	System-enz	Pm type	HET% (PIC)	NIM	Citations
11p15.1	D11S861	A136	CA P	86(NA†)	512	23; 24
11	D11S873	Mfd127	CA P	84(0.82)	317	21; 21
11	D11S874	Mfd161	CA P	62(0.57)	279	21; 21
11cen	D11S876	Mfd212	CA P	96(0.85)	193	21; 21
11q22-q23	D11Z1	pLC11A-Sau3A	RU S	64(0.44)	140	2; 2
11q24-qter	DRD2	c24,25	CA P	66(0.59)	353	25; 26
11p15.5	ETS1	footnotes§	RS S	51(0.31)	413	12; 13
11p15.5	HBB	footnotes§	RH S	73(0.53)	308	3; 3
11p15.5	HRAS	pTBB-2-T	RV S	57(0.57)	472	27; 2
11p15.5	INS	pHINS-310-Pv	RV S	91(0.82)	423	12; 2
11q13	INT2	pSS6-T	RS S	49(0.37)	419	8; 2
11q22-q23	NCAM	NCAM-B	RS S	62(0.34)	120	3; 2
11q23.2-qter	PBDG	pStPstNE-M	RS S	52(0.37)	426	8; 2
11q13	PGA	pPGA101-Bg	RS S	36(0.34)	318	8; 2
11q22-q23	PGR	hpR-50-H	RU S	74(0.54)	144	28; 2
11p15.2-p15.1	PTH	footnote§	RS S	52(0.35)	334	2; 2
11q13	PYGM	pMCMP1-M	RU S	61(0.54)	351	8; 2
11q13	SEA	clone3-H	RS S	48(0.36)	97	29; 2
11q22.3-q23	STMY	STMY-T	RS S	49(0.37)	289	30; 2
11q22.3-q23	TH	J4.7-T	RS S	19(0.19)	83	12; 2
11q22.3-q23	THY1	Thy-1-M	RS S	46(0.34)	277	30; 2
11q14-q21	TYR	pme134	RU S	54(0.37)	227	31; 2
12pter-p12.3	A2M	pha2m1-Bg	RU S	38(0.31)	12	1; 2
12pter-p12.3	A2M	pha2m1-Er	RU S	35(0.29)	15	3; 2
12pter-p12.3	A2M	pha2m1-Ha	RU S	37(0.30)	114	3; 2
12pter-p12.3	A2M	pha2m1-Hf	RU S	50(0.37)	187	3; 2
12pter-p12.3	A2M	pha2m1-Pv	RU S	31(0.26)	29	1; 2
12pter-p12.3	A2M	pha2m1-T	RU S	37(0.30)	65	3; 2
12p13	C1R	C1R-Pv	RU S	20(0.18)	111	4; 5
12p13	C1S	C1S-Pv	RU S	50(0.45)	30	4; 5
12q13.11-q13.12	COL2A1	cosHcol1-H	RU S	49(0.37)	215	6; 7
12q13.11-q13.12	D12S2	p12-16-E	RU S	21(0.19)	113	8; 8
12q13.11-q13.12	D12S4	p9F11-T	RU S	46(0.35)	268	8; 8
12q13.11-q13.12	D12S6	p11-E	RU S	20(0.18)	80	9; 9
12q13.11-q13.12	D12S6	p11-1-T	RU S	44(0.34)	318	9; 9
12q13.11-q13.12	D12S7	pDL32B-T	RU S	59(0.54)	439	8; 8
12q13.11-q13.12	D12S8	p7G11-M	RU S	29(0.25)	176	8; 8
12q13.11-q13.12	D12S8	p7G11-T-1	RU S	9(0.09)	31	8; 8
12q13.11-q13.12	D12S8	p7G11-T-2	RU S	48(0.36)	177	8; 8
12q13.11-q13.12	D12S11	LMS43-Hf	RV S	75(0.70)	561	10; 10
12q13.11-q13.12	D12S14	eFD33.2-M	RU S	65(0.59)	322	11
12q13.11-q13.12	D12S15	pCMM1.2-T	RU S	26(0.23)	222	12
12q13.11-q13.12	D12S16	pTHH14-T	RU S	41(0.32)	317	13
12q13.11-q13.12	D12S17	pYNH15-M	RU S	54(0.48)	373	14
12q13.11-q13.12	D12S18	pTHIZ53-R	RU S	26(0.23)	219	13
12q13.11-q13.12	D12S19	CRI-C86-P	RU S	64(0.57)	74	15
12q13.11-q13.12	D12S20	CRI-C2-E	RU S	45(0.35)	81	15
12q13.11-q13.12	D12S20	CRI-C2-P	RU S	57(0.49)	186	15
12q13.11-q13.12	D12S21	CRI-V834-M	RU S	44(0.34)	117	15
12q13.11-q13.12	D12S22	CRI-R102-T	RU S	66(0.60)	203	15
12q13.11-q13.12	D12S23	CRI-P153-M	RU S	48(0.37)	129	15
12q13.11-q13.12	D12S24	CRI-P102-M	RU S	19(0.17)	68	15
12q13.11-q13.12	D12S25	CRI-L809-M	RU S	51(0.45)	150	15
12q13.11-q13.12	D12S26	CRI-L416-E	RU S	82(0.80)	119	15
12q13.11-q13.12	D12S27	CRI-L409-E	RU S	31(0.27)	34	15
12q13.11-q13.12	D12S27	CRI-L409-Hc	RU S	49(0.37)	135	15
12q13.11-q13.12	D12S28	CRI-L575-T	RU S	49(0.37)	168	15
12q13.11-q13.12	D12S29	CRI-L303-M	RU S	33(0.30)	82	15
12q13.11-q13.12	D12S32	pmcf-2-11-Bn	RU S	22(0.19)	24	16; 16
12q13.11-q13.12	D12S36	CRI-L173-M	RU S	50(0.37)	180	15
12q13.11-q13.12	D12S37	IP12U28-M	RU S	42(0.33)	81	17
12q13.11-q13.12	D12S43	Mfd84	CAx P	77(0.74)	487	18
12q13.11-q13.12	D12S54	JH-5-Bg	RU S	50(0.37)	289	19
12q13.11-q13.12	D12S54	JH-5-T1	RU S	31(0.26)	76	19
12q13.11-q13.12	D12S54	JH-5-T2	RU S	19(0.17)	64	19
12q13.11-q13.12	D12S55	16C18-Ha	RU S	73(0.69)	493	20
12q13.11-q13.12	D12S58	Mfd73A	CA P	73(0.69)	65	18
12q13.11-q13.12	D12S59	Mfd75	CA P	80(0.77)	517	18
12q13.11-q13.12	D12S60	Mfd109	CA P	79(0.76)	469	18
12q13.11-q13.12	D12S61	Mfd114A	CA P	80(0.78		

Table 1. (continued)

Location	Locus	System-enz	Pm type	AM	HET% (PIC)	NIM	Citations
12pter-p12	F8VWF	vwf1	Tet	P	79(0.76)	493	24; 23
12pter-p12	F8VWF	vwf2	Cx	P	70(0.68)	442	24; 23
12pter-p12	F8VWF	vwtf	Cx	P	73(0.68)	447	25; 23
12pter-p12	F8VWF	Mfd92A	CA	P	69(0.64)	73	18; 23
12q22-q24.1	IGF1	IGF1-Pv	RU	S	30(0.26)	98	26; 27
12q22-q24.1	IGF1	Mfd1	CA	P	44(0.41)	295	18; 27
12p12.1	KRAS2	p640-T	RU	S	38(0.31)	154	28; 29
12p12.1	KRAS2	KRS-P	RU	S	37(0.32)	0	30; 29
12q22-q24.2	PAH	pPH72-H	RU	S	51(0.43)	198	8; 31
12q22-q24.2	PAH	pPH72-M	RU	S	48(0.36)	209	8; 31
12q23-qter	PLA2	pla-2	TTA	P	76(0.73)	465	32; 33
12q21-q23	PMCA1	12CaATP-P	RU	S	44(0.34)	107	34; 34
12p13.2	PRB1	pPRP-E-1	RU	S	64(0.58)	361	8; 34
12p13.2	PRB2	pPRP-E-2	RU	S	41(0.39)	187	36; 35
12p13.2	PRB3	pPRP-E-3	RU	S	12(0.12)	89	36; 35
12p13.2	PRB4	pPRP-E-4	RU	S	51(0.46)	223	36; 35
12	TUBAL1	MHL1301-M	RU	S	47(0.36)	208	37
12	1RB2.3-T	RU	S	43(0.39)	343	4	
12	T4F1-T	RU	S	33(0.28)	227	4	
13q21-q31	ATP1AL1	p78-1-13-Pv,M	RU	S	53(0.43)	257	1; 2
13q12-q14	ATRC1	pLTH-T	RS	S	40(0.32)	238	3; 3
13q34-qter	COL4A1	HT21-Ha	RS	S	55(0.46)	221	4; 5
13q34-qter	COL4A1	HT21-H	RS	S	50(0.37)	306	4; 5
13q34-qter	COL4A1	HT21-Hf	RS	S	33(0.28)	111	4; 5
13q34-qter	COL4A1	HT21-Xm	RS	S	17(0.16)	75	4; 5
13q34-qter	COL4A1	HT21-HAP	RS	S	67(0.61)	75	4; 5
13q34-qter	COL4A2	HT39-T	RS	S	33(0.28)	179	4; 6
13q13	D13S1	p7F12-T	RR	S	39(0.32)	345	7; 8
13q13	D13S1	p7F12-M	RU	S	50(0.37)	345	7; 8
13q22	D13S2	p9D11-M	RU	S	49(0.39)	375	7; 7
13q22	D13S2	p9D11-T	RU	S	30(0.26)	128	7; 7
13q33-qter	D13S3	p9A7-H	RU	S	49(0.37)	431	7; 9
13q33-qter	D13S3	p9A7-M	RU	S	46(0.36)	196	7; 9
13q22-q31	D13S4	p1E8-M	RU	S	50(0.37)	458	7; 9
13	D13S5	pHUB8-E	RU	S	37(0.30)	143	10
13	D13S5	pHUB8-H	RU	S	30(0.25)	84	10
13q12.3	D13S6	pHU10-Xm	RS	S	41(0.32)	348	10; 8
13q12.3	D13S6	pHU10-E	RS	S	20(0.18)	125	10; 8
13q22	D13S7	pHU26-Bg	RU	S	30(0.26)	61	10; 9
13q14	D13S10	p7D2-Dr	RU	S	48(0.36)	287	11; 7
13q14	D13S10	p7D2-T	RU	S	32(0.27)	93	7; 7
13q12.3	D13S11	pG2E3.1-M	RU	S	31(0.26)	244	12; 13
13q21	D13S12	pG18E2.1-M	RU	S	31(0.26)	255	14; 13
13q14.1	D13S21	pG24E2.4-Bp	RU	S	50(0.37)	260	15; 13
13q14.1	D13S22	pG14E1.9-Dr	RU	S	39(0.32)	235	16; 13
13	D13S24	pG50-Sspl	RU	S	31(0.26)	199	17
13q14.2-q14.3	D13S25	pH2-42-Sspl	RU	S	47(0.36)	286	18; 19
13q21	D13S26	pH2-10-Hphl	RU	S	47(0.36)	328	20; 21
13q21	D13S26	pH2-10-Bp	RU	S	10(0.10)	85	20; 21
13q21	D13S26	pH2-10-E	RU	S	39(0.32)	36	20; 21
13q14.3-q21.2	D13S31	pCR1324	RU	S	49(0.37)	310	22; 8
13q34-qter	D13S32	pCR1318-Bg	RU	S	50(0.37)	323	22; 8
13q34-qter	D13S32	pCR1318-Er	RU	S	50(0.37)	97	22; 8
13q12.3	D13S33	pCR1359-T	RU	S	41(0.35)	267	22; 8
13q34-qter	D13S34	pCR1330-T	RU	S	30(0.25)	185	22; 8
13	D13S35	pCR1323-E	RU	S	42(0.33)	233	22
13q12	D13S36	pCR1360-E	RU	S	50(0.37)	325	22; 8
13q14	D13S37	pTHI62-Bg	RV	S	62(0.54)	563	23; 8
13q22-q31	D13S38	WC64-Bg	RU	S	46(0.36)	452	24; 19
13q14.3-q22	D13S39	WC25-M	RU	S	42(0.36)	429	24; 19
13q22-q31	D13S40	WC47-E	RU	S	32(0.27)	204	24; 19
13q14.3-q22	D13S41	WC83-T	RU	S	48(0.36)	478	24; 19
13q31-qter	D13S42	WC95-E	RU	S	38(0.31)	181	24; 19
13	D13S49	pCMI40-Hf	RU	S	67(0.62)	430	25
13	D13S49	pCMI40-Pv	RV	S	45(0.40)	343	25
13	D13S50	pYNH20-H	RU	S	50(0.37)	130	26
13	D13S51	pMHZ17-T	RV	S	14(0.13)	34	27
13	D13S52	cMHZ47-M	RV	S	82(0.79)	631	28
13	D13S52	cMHZ47-Ha	RU	S	79(0.76)	520	28
13	D13S53	cYNA12-M	RV	S	66(0.60)	169	29
13	D13S54	cMCOC46-P	RV	S	51(0.46)	502	30
13	D13S54	p2cMCOC46-P	RU	S	44(0.37)	416	30
13q14.3	D13S55	CRI-R214-M	RU	S	22(0.19)	8	31; 19
13q14.3	D13S55	CRI-R214-T	RU	S	45(0.35)	268	31; 19
13q14.2-q14.3	D13S56	CRI-V1134-H	RU	S	56(0.50)	196	31; 19
13	D13S59	pR14-Bn	RU	S	48(0.36)	368	32

Table 1. (continued)

Location	Locus	System-enz	Pm type	AM	HET% (PIC)	NIM	Citations	
13	D13S60	AGS7-BglII	RS	S	50(0.37)	214	33	
13	D13S61	pF5a-Bn	RU	S	33(0.28)	114	34	
13	D13S61	pF5a-Xm	RU	S	37(0.30)	211	34	
13	D13S62	pL28-5-Xm	RU	S	26(0.23)	195	35	
13	D13S64	H37-T	RU	S	38(0.30)	229	36; 36	
13	D13S71	Mfd44	CA	P	73(0.69)	450	37	
13q22-q31	D13S85	WC3-M	RU	S	50(0.37)	304	24; 19	
13q31-qter	D13S92	WC67-M	RU	S	54(0.44)	375	24; 19	
13q31-qter	D13S95	WC88-M	RU	S	11(0.10)	77	24; 19	
13q34-qter	D13S107	CEB5-Ha	RV	S	74(0.69)	505	38; 38	
13	D13S115	MIT-MS34	CA	P	64(0.58)	410	39	
13	D13S118	Utsw1312	CA	P	72(0.67)	433	40	
13	D13S119	Utsw1310	CA	P	77(0.74)	532	40	
13	D13S120	Utsw1353	CA	P	78(0.76)	525	40	
13	D13S121	Utsw1305	CA	P	76(0.74)	497	40	
13	D13S122	Utsw1334	CA	P	81(0.79)	432	40	
13	D13S123	cMCOE51-Pv	RV	S	63(0.56)	328	41	
13	D13S125	Utsw1320	CA	P	71(0.68)	458	40	
13	D13S126	Utsw1303	CA	P	64(0.60)	366	40	
13	D13S127	Utsw1341	CA	P	62(0.55)	293	40	
13	D13S144	Utsw1348	CA	P	79(0.76)	460	40	
13cen	D13Z1	alphaR1(680)-T	RS	S	26(0.23)	197	42; 43	
13q14.1-q14.2	ESD	EL-22-Bn	RU	S	47(0.36)	327	33; 19	
13q14.1-q14.2	ESD	Esterase-D-serol	PP	N	19(0.17)	71	44; 19	
13q34-qter	F10	pcHX14-Bc	RS	S	27(0.24)	138	45; 46	
13q14	HTR2	5HT2-Pv	RU	S	49(0.37)	388	47; 47	
13q32	PCCA	pPCC9-5-Xm	RS	S	48(0.36)	230	48; 49	
13q12	PPOLP1	pCD-12-H	RU	S	35(0.29)	185	50	
13q12	RB1	p68RS2.0-Dr	RV	S	64(0.60)	369	51; 19	
13	RB1	p123m1.8(U)-B	RS	S	40(0.32)	179	52; 19	
13q12	RB1	p123m1.8(L)-B	RS	S	40(0.32)	232	52; 19	
13	RB1	p88R0.6-X	RS	S	49(0.37)	246	51; 19	
13q33-qter	RB1	p35R0.6-Tth	RS	S	21(0.19)	101	51; 19	
13q33-qter	TUBBP2	p21beta-3'UT-M	RU	S	28(0.24)	156	53	
13q33-qter	TUBBP2	p21beta-3'UT-M	RU	S	70(0.68)	127	53	
13	RB1	p9F4-E	RU	S	39(0.31)	177	54	
13cen	L1.26(1.2)-Ha	RU	S	S	32(0.27)	176	55; 56	
13cen	L1.26(1.2)-Mb	RU	S	S	33(0.28)	180	55; 56	
13cen	L1.26(1.6)-Ha	RU	S	S	46(0.35)	339	55; 56	
13cen	L1.26(1.6)-Mb	RU	S	S	48(0.37)	472	55; 56	
13q14	D13S14	CTSG	TDp391-M	RU	S	40(0.32)	51	1; 2
13q14	D13S14	CTSGL2	TDp445-M	RU	S	45(0.36)	127	1; 2
13q21	D13S14	CTSGL2	TDp446-M	RU	S	48(0.37)	218	1; 2
13q14.1	D14S1	pAW101-E	RV	S	79(0.76)	242	3; 4	
13q14.1	D14S1	pAW101-Bg	RU	S	62(0.55)	8	1; 4	
13	D14S12	LEMBL3.121-Bg	RU	S	49(0.37)	36	5	
13	D14S13	pMLJ14-R	RV	S	81(0.79)	438	6	
13q21	D14S16	pTHH37-T	RV	S	51(0.40)	196	6; 4	
13q21	D14S17	pEFZ18.2-T	RS	S	44(0.34)	272	7; 4	
13q21	D14S18	pMHZ9-E	RS	S	16(0.14)	91	8; 4	
13q32.1-q32.32	D14S18	pMHZ9-T	RU	S	16(0.15)	89	8; 4	
13q32.1-q32.32	D14S19	pHHH208-B	RS	S	60(0.52)	156	9; 4	
13q32.1-q32.32	D14S20	pMCOC12-M	RV	S	67(0.61)	298	6; 4	
13q32.1-q32.32	D14S21	pCMM62-H	RU	S	37(0.30)	144	10; 4	
13q32.1-q32.32	D14S23	cKKA9-R	RV	S	80(0.77)	405	6; 4	
13	D14S24	CRI-C70-M	RU	S	85(0.83)	223	11	
13q12	D14S25	CRI-L329-T	RU	S	49(			

Table 1. (continued)

Location	Locus	System-enz	Pm			HET%		NIM	Citations	
			type	AM	(PIC)	NIM	Citations			
14	D14S55	Mfd198	CA	P	53(0.49)	270	17	16q22.1	D16S4	
14qtel	D14S82	HTY2070C14-M	RU	S	70(0.65)	308	1; 1	16q24.3-qter	D16S7	
14qtel	D14S82	HTY2070C24-E	RU	S	30(0.25)	145	1; 1	16p13.13-p13.12	D16S8	
14q32.3-qter	IGHJ	p3.4BHI-Bg	RV	S	73(0.68)	253	18; 4	16q21	D16S10	
14q11.2-q13	MYH7	sCAW2	CA	P	82(0.80)	496	19; 20	16q21	D16S10	
14q32.1	PI	pAT4.6-Ss	RU	S	51(0.47)	203	21; 4	16q21	D16S10	
14q11-q12	TCR	pY1.4-T	RU	S	47(0.37)	204	22; 23	16q24.1	D16S20	
14q11	TRP2	phLPT/RS-2-X	RU	S	49(0.37)	159	24; 24	16q22.1	D16S38	
14			14048	OL	O	49(0.37)	236	25	16q12.1-q13	D16S39
14			14061	OL	O	46(0.36)	157	25	16q24.2-qter	D16S41
14			140HT	OL	O	46(0.36)	240	26	16p12.3	D16S42
14			1828-M	RU	S	39(0.31)	124	27	16q24.1-q24.2	D16S43
14			1858-X	RU	S	11(0.11)	33	27	16p24.1-q24.2	D16S43
								16q24.3-qter	D16S44	
15q11-qter	ACTC	ACTC	CA	P	74(0.69)	554	1; 2	16pter-p13.3	D16S45	
15	CHRNA5	a5-T	RU	S	46(0.36)	212	3	16pter-p13.3	D16S45	
15q21	CYP19	CYP19	Tet	P	73(0.68)	460	4; 5	16q22.1	D16S46	
15q22-q24	CYP1A1	phP1-450-M	RU	S	24(0.21)	67	6; 7	16p22.1	D16S46	
15q22-q24	CYP1A1	phP1-450-T	RU	S	28(0.24)	14	8; 7	16q22.1	D16S47	
15q14-q21	D15S1	pMS1-14-M	RU	S	48(0.37)	463	9; 10	16p12.1-p11.2	D16S48	
15q15-q22	D15S2	pDP151-E	RU	S	33(0.28)	193	11; 10	16p13.2	D16S49	
15	D15S3	pJU201-Bg	RU	S	45(0.37)	166	8	16q23.3-16q24.1	D16S50	
15	D15S3	pJU201-E	RU	S	49(0.37)	333	12	16p13.2	D16S51	
15q12-q24	D15S4	phage15-B	RU	S	25(0.22)	99	13; 7	16q12.1-q13	D16S52	
15q11-q12	D15S11	p4-3R	CA	P	66(0.63)	365	14; 7	16pter-p13.3	D16S55	
15q13	D15S24	pCMW1-T	RU	S	61(0.56)	282	15; 15	16pter-p13.3	D16S56	
15	D15S25	pTHH114-R	RS	S	48(0.36)	338	11	16pter-p13.3	D16S56	
15	D15S26	pMCT46.2-Pv	RU	S	23(0.21)	207	16	16pter-p13.3	D16S58	
15	D15S27	pTHH55-M	RU	S	42(0.33)	336	17	16pter-p13.2	D16S60	
15	D15S28	pYNZ90.1-B	RU	S	35(0.29)	262	18	16q24.2-qter	D16S62	
15	D15S29	pEFD49.3-M	RS	S	50(0.37)	154	19	16pter-p13.3	D16S63	
15	D15S30	pEKZ104.1-M	RU	S	50(0.37)	327	20	16p12.3	D16S64	
15	D15S33	pMCMA1-1-Pv	RU	S	29(0.25)	193	21	16q13	D16S65	
15	D15S34	pMCT149.2-M	RU	S	49(0.37)	220	22	16q13	D16S65	
15	D15S35	pYNM18.1-T	RU	S	49(0.37)	323	23	16q13	D16S65	
15	D15S36	pYNM15.2-T	RU	S	38(0.31)	249	24	16p12.3-p12.2	D16S67	
15	D15S37	pEFD85.7-E	RS	S	50(0.37)	431	25	16p12.3-p12.2	D16S67	
15	D15S38	pEFD49.2-T	RU	S	49(0.38)	318	26	16p12.3	D16S75	
15	D15S44	pEFD52.1-T	RU	S	38(0.31)	305	27	16p12.3	D16S75	
15	D15S45	pEFZ33-H	RS	S	41(0.33)	261	28	16p13.12-p13.11	D16S79A	
15	D15S46	CRI-L146-H	RU	S	48(0.36)	117	29	16pter-p13.3	D16S83	
15	D15S46	CRI-L146-M	RU	S	73(0.68)	81	29	16pter-p13.3	D16S84	
15	D15S47	CRI-L389-Bg	RU	S	86(0.85)	96	29	16pter-p13.3	D16S85	
15	D15S48	CRI-L442-M	RU	S	64(0.56)	207	29	16pter-p13.3	D16S85	
15	D15S49	CRI-L1204-M	RU	S	47(0.36)	167	29	16pter-p13.3	D16S94	
15	D15S50	CRI-P78-B	RU	S	31(0.26)	121	29	16p13.11	D16S96	
15	D15S51	CRI-P452-M	RU	S	31(0.26)	82	29	16p13.11	D16S96	
15	D15S52	CRI-R382-M	RU	S	66(0.61)	191	29	16p13.11	D16S96	
15	D15S74	DM11-Su	RS	S	46(0.36)	150	30	16p12.3	D16S131	
15	D15S86	pMS620-Mb	RV	S	86(0.84)	519	31	16p12.2-p12.1	D16S148	
15	D15S87	Mfd49	CA	P	88(0.87)	499	32	16q12.1-q13	D16S150	
15	D15S97	MS14	CA	P	82(0.79)	498	33	16q21	D16S151	
15	D15S99	MS149	CA	P	55(0.49)	351	33	16q21	D16S151	
15	D15S103	G113	CA	P	80(0.77)	499	33	16q22.3-q23.1	D16S153	
15	D15S105	CEB27-Ha	RV	S	69(0.63)	360	34	16q24.1-q24.2	D16S157	
15	D15S107	Mfd87	CA	P	71(0.67)	257	35	16q21	D16S164	
15	D15S108	Mfd102	CA	P	57(0.55)	372	35	16q22.1	D16S186	
15	D15S110	Utsw1518	CA	P	53(0.49)	322	36	16q12.1-q13	D16S261	
15	D15S111	Utsw1513	CA	P	74(0.69)	411	36	16q21	D16S265	
15	D15S112	Utsw1547	CA	P	68(0.64)	442	36	16p13.11	D16S287	
15q21.1	FBN1	Fib15TAAAAA	TA4	P	47(0.42)	153	37; 7	16p13.13-p13.12	D16S292	
15q11.2-q12	GABRB3	B25E9	CA	P	79(0.77)	258	38; 7	16q22.3-q23.1	HP	
15q25-qter	PEPN	pAPN-E-Dr	RU	S	41(0.33)	258	39; 7	17	APOH	
15q25-qter	PEPN	pAPN1-Bc	RU	S	43(0.34)	330	39; 7	17q11.2-q12	CRYB1	
15q15	THBS1	THBS1	CA	P	33(0.31)	88	40; 41	17p13.1	D17S1	
15		IP15M68	CA	P	53(0.43)	118	42	17q23-qter	D17S4	
15		IP15M9	CA	P	79(0.77)	208	42	17q23-qter	D17S20	
15		MH22	CA	P	67(0.61)	372	43	c1-26-T	D17S26	
15		PKKA25-M	RU	S	70(0.65)	511	17	pC63-M	D17S26	
15		PNL-X	RU	S	38(0.31)	183	44	pRMU-3-P	D17S26	
15		PTHIZ52-M	RU	S	50(0.37)	321	17	cEFID52-Pv	D17S27	
16q24.3-qter	APRT	Aprt-Bg	RS	S	50(0.30)	27	1; 2	pRMU-1-P	D17S27	
16q24.3-qter	APRT	Aprt-T	RS	S	28(0.27)	192	3; 2	17p13.3	D17S28	
16q23.1-q23.2	CTR	pEXKp3B-Pv	RS	S	38(0.36)	311	1; 2	17p13.3	D17S28	
16q22.1	D16S4	IACH207-M	RS	S	39(0.31)	179	4; 2	17p11.2	D17S29	
16q22.1	D16S4	ZACH207-M	RS	S	46(0.35)	274	4; 2	17p11.2	D17S29	

Table 1. (continued)

Location	Locus	System-enz	Pm			HET%		NIM	Citations
			type	AM	(PIC)	NIM	Citations		
16q22.1	D16S4	ACh207-T	RS	S	34(0.28)	233	4; 2	16q22.1	D16S4
16q22.1	D16S4	ACh207-M	RS	S	82(0.77)	677	5; 2	16q22.1	D16S4
16q22.1	D16S4	AChF1.1A6-Pv	RS	S	50(0.37)	354	6; 2	16q22.1	D16S4
16q22.1	D16S4	AChF3.5.1-M	RS	S	18(0.16)	75	7; 2	16q22.1	D16S4
16q22.1	D16S4	AChF3.5.1-T	RS	S	41(0.32)	315	8; 2	16q22.1	D16S4
16q22.1	D16S4	AChF3.5.1-T	RS	S	47(0.36)	66	8; 2	16q22.1	D16S4
16q22.1	D16S4	ph-8-Bg	RS	S	47(0.35)	406	1; 1	16q22.1	D16S4
16q22.1	D16S4	ph-8-Bg	RS	S	33(0.37)	111	9; 2	16q22.1	D16S4
16q22.1	D16S4	CRI-O2-B	RS	S	21(0.19)	73	9; 2	16q22.1	D16S4
16q22.1	D16S4	CRI-O2-B	RS	S	79(NA)	237	9; 2	16q22.1	D16S4
16q22.1	D16S4	CRI-O89-Bg	RS	S	62(0.45)	206	9; 2	16q22.1	D16S4
16q22.1	D16S4	CRI-O90-Dr	RS	S	14(0.26)	52	9; 2	16q22.1	D16S4
16q22.1	D16S4	CRI-O90-E	RS	S	49(0.37)	304	9; 2	16q22.1	D16S4
16q22.1	D16S4	CRI-O91-M	RS	S	38(0.30)	137	9; 2	16q22.1	D16S4
16q22.1	D16S4	CRI-O91-T	RS	S	36(NA)	104	9; 2	16q22.1	D16S4
16q22.1	D16S4	CRI-O95-E	RS	S	50(0.43)	158	9; 2	16q22.1	D16S4
16q22.1	D16S4	CRI-O101-H	RS	S	45(0.33)	144	9; 2	16q22.1	D16S4
16q22.1	D16S4	CRI-O114-E	RS	S	43(0.40)	169	9; 2	16q22.1	D16S4
16q22.1	D16S4	CRI-O119-T	RS	S	39(0.36)	162	9; 2	16q22.1	D16S4
16q22.1	D16S4	CRI-O120-B	RS	S	64(0.55)	220	9; 2	16q22.1	D16S4
16q22.1	D16S4	CRI-O123-H	RS	S	33(0.26)	92	9; 2	16q22.1	D16S4
16q22.1	D16S4	CRI-O128-Hc	RS	S	24(0.21)	72	9; 2	16q22.1	D16S4
16q22.1	D16S4	CRI-O129-E	RS	S	12(0.17)	75	9; 2	16q22.1	D16S4
16q22.1	D16S4	CRI-O130-H	RS	S	33(0.30)	235	9; 2	16q22.1	D16S4
16q22.1	D16S4	CRI-O132-H	RS	S	38(0.33)	276	9; 2	16q22.1	D16S4
16q22.1	D16S4	CRI-O133-H	RS	S	43(0.33)	248	9; 2	16q22.1	D16S4
16q22.1	D16S4	CRI-O137-Hc	RS	S	31(0.37)	84	9; 2	16q22.1	D16S4
16q22.1	D16S4	CRI-O137-T	RS	S	19(0.21)	56	9; 2	16q22.1	D16S4
16q22.1	D16S4	CRI-O377-Hc	RS	S	38(0.35)	128	9; 2	16q22.1	D16S4
16q22.1	D16S4	CRI-O377-T	RS	S	39(0.35)	350	1; 2	16q22.1	

Table 1. (continued)

Location	Locus	System-enz	Pm type	AM	HET% (PIC)	NIM	Citations
17p13.3	D17S30	pYNZ22-R	RV	S	80(0.77)	766	13; 4
17p13.1	D17S31	pMCT35.1-M	RS	S	43(0.30)	369	14; 4
17	D17S32	pHHH152-B	RS	S	48(0.36)	257	1
17p13.3	D17S34	p144D6-R	RV	S	76(0.72)	741	15; 4
17	D17S35	CRI-P3-M	RS	S	50(0.37)	165	16
17cen-q11.2	D17S37	CRI-L581-T	RU	S	60(0.55)	191	17; 17
17q12-q24	D17S40	LEW101-M	RS	S	40(0.33)	214	18; 18
17	D17S41	LEW102-P	RS	S	45(0.36)	282	18; 18
17q12-q24	D17S43	LEW104-M	RS	S	21(0.27)	93	19; 19
17q12-q24	D17S52	LEW115-P	RS	S	11(0.11)	40	19; 19
17cen-q11.2	D17S54	LEW203-T	RS	S	27(0.23)	NA	19; 19
17cen-q11.2	D17S54	LEW203-Bg	RS	S	40(0.34)	58	19; 19
17cen-q11.2	D17S55	LEW204-Bg	RS	S	34(0.30)	122	19; 19
17cen-q11.2	D17S55	LEW204-M	RS	S	39(0.32)	39	19; 19
17cen-q11.2	D17S56	LEW205-R	RS	S	26(0.22)	41	19; 19
17cen-q11.2	D17S57	LEW206-M	RS	S	38(0.31)	183	19; 19
17p11.2-cen	D17S58	EW301-T	RS	S	50(0.37)	207	19; 19
17p11.2-cen	D17S58	EW301-Bg	RS	S	45(0.35)	91	19; 19
17p12-p11.2	D17S61	LEW401-M	RS	S	33(0.28)	60	19; 19
17pter-p12	D17S65	EW501-H	RS	S	45(0.35)	169	19; 19
17pter-p12	D17S66	EW502-Bg	RS	S	47(0.36)	168	18; 18
17p11.2	D17S71	ABL10-41-Pv	RS	S	28(0.24)	235	1; 1
17p11.2	D17S71	ABL10-41-M	RS	S	50(0.37)	409	1; 1
17cen-q11.2	D17S72	pEW208-R	RS	S	38(0.30)	61	19; 19
17cen-q11.2	D17S73	pEW207-Bg	RS	S	45(0.35)	185	19; 19
17cen-q11.2	D17S73	pEW207-H	RS	S	45(0.35)	165	19; 19
17cen-q11.2	D17S74	p3C4.2-M	RS	S	28(0.22)	101	20; 20
17q23-qter	D17S77	p12B810-T	RS	S	37(0.37)	294	21; 21
17q23-qter	D17S77	p12B81-E	RS	S	33(0.32)	211	21; 21
17q23-qter	D17S79	pAC256-Pv	RV	S	79(0.76)	454	22; 1
17q12	D17S80	pYNZ94-P	RS	S	32(0.30)	216	23; 24
17q11	D17S82	pTH17.19-Bg	RS	S	59(0.36)	287	20; 20
17q11.2-q12	D17S83	f2C11.1-T	RS	S	44(0.34)	279	20; 20
17q11.2-q12	D17S83	p2C11.7-B	RS	S	40(0.27)	64	20; 20
17q11.2-q12	D17S83	p2C11.5-T	RS	S	40(0.34)	231	20; 20
17q11.2-q12	D17S85	p2F9.8-T	RS	S	25(0.21)	88	20; 20
17q11.2-q12	D17S85	p2F9.2-T	RS	S	48(0.37)	355	20; 20
17	D17S86	pCMM86-Hf	RV	S	81(0.78)	652	25
17cen-q11.2	D17S115	VAW210M2-M	RS	S	38(0.31)	181	19; 19
17cen-q11.2	D17S115	VAW210M1-M	RS	S	44(0.34)	281	19; 19
17cen-q11.2	D17S116	VAW211R3-M	RS	S	8(0.07)	27	19; 19
17cen-q11.2	D17S117	VAW212R2-P	RS	S	35(0.29)	178	19; 19
17cen-q11.2	D17S118	VAW213R2-M	RS	S	48(0.36)	217	19; 19
17cen-q11.2	D17S119	VAW214R4-M	RS	S	46(0.35)	192	19; 19
17cen-q11.2	D17S120	VAW215R2B-T	RS	S	49(0.37)	117	19; 19
17p12-p11.2	D17S121	LEW405-M	RS	S	44(0.34)	87	-19; 19
17p12-p11.2	D17S122	VAW409R3-M	RS	S	57(0.47)	282	19; 19
17p12-p11.2	D17S124	VAW411R2-Bg	RS	S	32(0.27)	83	19; 19
17p12-p11.2	D17S125	VAW412R3-M	RS	S	32(0.27)	95	19; 19
17pter-p12	D17S126	EW506-H	RS	S	38(0.30)	151	19; 19
17q11.2	D17S135	p11-1F10-P	RS	S	46(0.37)	301	20; 20
17q11.2-q12	D17S250	Mfd15	CA	P	81(0.77)	651	26; 26
17p12-p11.2	D17S261	Mfd41	CA	P	52(0.48)	233	26; 26
17q11	D17S331	pHHH202-R	RS	S	47(0.37)	331	27; 20
17pter-p13	D17S450	STR16C17-Ha	RV	S	69(0.63)	130	28; 28
17cen-q11.2	D17S454	8B10.2-Bg	RS	S	49(0.37)	374	20; 20
17p12	D17S457	1c6G1-Pv	RS	S	54(0.37)	472	11; 29
17p12	D17S457	2c6G1	RS	S	51(0.35)	417	11; 29
17p12	D17S460	10E4.3-B	RS	S	48(0.37)	391	11; 29
17	D17S497	pM8-Bg	RS	S	29(0.26)	194	11
17	D17S498	pATB20-Pv	RV	S	67(0.61)	185	11
17	D17S499	cLS17.6-Pv	RS	S	49(0.37)	376	11
17	D17S500	cLS17.1-T	RS	S	33(0.32)	262	11
17	D17S501	cLS17.9-M	RS	S	54(0.45)	437	11
17	D17S501	2cLS17.9-M	RS	S	42(0.35)	268	11
17q23-qter	D17S502	c17IG9-T	RS	S	46(0.35)	335	11; 20
17q12-q24	D17S503	c17H3-M	RU	S	79(0.76)	302	11; 20
17	D17S504	fLB17.14-Bg	RV	S	78(0.75)	302	11
17	D17S505	fLB17.8-A	RV	S	84(0.82)	548	11
17	D17S506	fLB17.9-P	RS	S	49(0.37)	380	11
17	D17S507	cLS17.13-B	RS	S	54(0.44)	489	11
17	D17S507	cLS17.13-Bg	RS	S	54(0.44)	502	11
17	D17S508	fLB17.20-M	RS	S	54(0.47)	423	11
17	D17S508	fLB17.20-E	RS	S	47(0.36)	381	11
17	D17S509	fLB17.1-Ha	RV	S	78(0.75)	539	11
17	D17S510	fLB17.3-A	RV	S	79(0.76)	687	11
17	D17S511	fLB17.18-T	RS	S	5990.38	397	11

Table 1. (continued)

Location	Locus	System-enz	Pm type	AM	HET% (PIC)	NIM	Citations
17	D17S512	fLB17.2-A	RV	S	83(0.81)	840	11
17	D17S515	2KZ22-B4U	CA	P	87(0.85)	602	11
17	D17S516	2KZ22-B10	CA	P	48(0.38)	360	11
17cen-q11.2	D17S517	c17ZB-M	RS	S	28(0.24)	240	21; 20
17	D17S740	2KZ14-B4	CA	P	77(0.75)	455	11
17	D17S763	fLB17.7-Ha	RV	S	79(0.76)	550	11
17	D17S764	fLB17.17-R	RS	S	50(0.38)	245	11
17	D17S764	fLB17.17-T	RS	S	50(0.38)	383	11
17q23-qter	D17S765	pCM1327-H	RV	S	71(0.66)	339	11
17	D17S766	pMCOB17-Hf	RV	S	79(0.76)	339	11
17cen-q11.2	D17S767	c17H4-M	RS	S	48(0.36)	64	11; 20
17cen-q11.2	D17S768	c17ID3-T	RS	S	18(0.16)	144	11; 20
17cen-q11.2	D17S770	c17ID11-B	RS	S	64(0.56)	371	11; 20
17cen-q11.2	D17S771	pTH17.14-E	RS	S	38(0.31)	121	11
17cen-q11.2	D17S772	pTH17.12-T	RS	S	49(0.37)	357	11; 20
17cen-q11.2	D17S773	pTH17.26-T	RS	S	43(0.32)	278	11
17p11.2-cen	D17S774	fLB17.4-Bg	RS	S	38(0.30)	335	11
17p11.2-cen	D17S775	pLB17.10-Ha	RV	S	78(0.75)	704	11; 30
17p12-p11.2	D17S777	pSL1-P	RS	S	44(0.36)	405	11
17pter-p12	D17Z1	p3.6-E	RU	S	40(0.33)	230	1; 1
17pter-p12	EVI2A	pHu39.3-E	RS	S	42(0.37)	193	31; 32
17p11.2	D17S778	GH800-Bg	RS	S	49(0.37)	200	33; 33
17p11.2	D17S778	GH800-Hc	RS	S	47(0.36)	232	33; 33
17p12-p11.2	D17S779	GLUT4	RS	S	46(0.35)	172	34; 34
17cen-q11.2	D17S780	HOX2B	RS	S	42(0.33)	142	35; 33
17cen-q11.2	D17S781	BS3.HOX-S	RS	S	42(0.33)	133	39; 39
17cen-q11.2	D17S782	MPO	RS	S	39(0.32)	97	36; 33
17q23-qter	D17S783	MYH2	RS	S	38(0.32)	233	37; 4
17q23-qter	D17S784	NF1	RS	S	39(0.36)	268	11; 38
17q23-qter	D17S785	T315.5-E	RS	S	49(0.36)	346	11; 38
17q23-qter	D17S786	NGFR	RS	S	42(0.33)	133	39; 39
17q23-qter	D17S787	pE51-Hc	RS	S	49(0.37)	316	48; 4
17q23-qter	D17S788	NME1	RS	S	48(0.37)	233	40; 40
17q23-qter	D17S789	NM23-E	RS	S	41(0.33)	51	40; 40
17q23-qter	D17S790	POL2R	RS	S	48(0.36)	120	41; 4
17q23-qter	D17S791	POL2R	RS	S	48(0.36)	122	41; 4
17q23-qter	D17S792	PPY-M	RS	S	49(0.37)	269	36; 42
17q23-qter	D17S793	PRKCA	RS	S	49(0.37)	36	43; 43
17q23-qter	D17S794	PRKCA1-K	RS	S	36(0.30)	54	43; 43
17q23-qter	D17S795	RARA	RS	S	33(0.28)	41	44; 45
17q23-qter	D17S796	THR1	RS	S	41(0.32)	184	46; 24
17q23-qter	D17S797	TK1	RS	S	50(0.37)	331	1; 47
17q23-qter	D17S798	TP53	RS	S	49(0.37)	316	48; 4
17q23-qter	D17S799	4A11-M	RS	S	50(0.37)	277	11; 29
17q23-qter	D17S800	c17-1H1-Bg	RS	S	27(0.23)	91	11; 20
17q23-qter	D17S801	fLB17.5-P	RS	S	46(0.35)	178	11
17q23-qter	D17S802	fLB17.16-Bg	RS	S	65(0.59)	78	11
17q23-qter	D17S803	fLB17.6-Bg	RS	S	18(0.16)	88	11
17q23-qter	D17S804	fLB17.6-Pv	RS	S	49(0.37)	88	11
17q23-qter	D17S805	p242-P	RS	S	39(0.32)	224	49
17pter-p12	D18S11	pERT25-Hf	RV	S</			

Table 1. (continued)

Location	Locus	System-enz	HET%				NIM	Citations
			Pm type	AM	(PIC)	NIM		
19	CYP2B	CYP2B-B	RU	S	53(0.37)	316	3	
19	CYP2F	CYP2F-X	RU	S	45(0.31)	159	3	
19	D19S7	p4.1-M	RU	S	50(0.36)	311	3	
19	D19S8	D19S8-Ss	RU	S	58(0.45)	361	3	
19	D19S13	pHW60-T	RU	S	47(0.38)	305	3	
19p13.3	D19S20	pJCZ3.1-Hf	RV	S	79(NA)	462	5; 2	
19	D19S21	cMC085-P	RU	S	63(NA)	310	5	
19	D19S22	D19S22-P	RU	S	46(0.35)	133	3	
19	D19S22	pEF4.2-Pv	RU	S	44(0.36)	227	3	
19	D19S24	1MCT6-B	RU	S	67(NA)	194	5	
19	D19S24	3MCT6-B	RU	S	35(0.27)	112	5	
19	D19S26	PRMR53-B	RU	S	24(0.22)	90	3	
19	D19S27	D19S27-Bn	RU	S	31(0.28)	182	3	
19	D19S47	Mfd9	CA	P	72(0.69)	403	1	
19q12	D19S49	Mfd11	CA	P	79(0.71)	471	6; 7	
19	D19S50	RB1-1-T	RU	S	50(NA)	209	3	
19	D19S50	RB1-4-T	RU	S	54(0.39)	217	3	
19	D19S63	pD10-Pv	RU	S	58(0.46)	205	3	
19	D19S75	Mfd13	CA	P	60(0.61)	298	8	
19	D19S76	Mfd37	CA	P	52(0.40)	284	9	
19	D19S114	Mfd112	CA	P	55(NA)	162	4	
19	D19S177	Mfd120	CA	P	82(0.77)	481	3	
19	D19S178	Mfd139	CA	P	80(0.74)	488	3	
19	D19S179	Mfd176	CA	P	68(NA)	404	3	
19	D19S180	Mfd195	CA	P	72(0.71)	420	3	
19	D19S190	f20102	CAC	P	NA(0.55)	463	10	
19	D19S191	f18277	CA	P	≥70(0.79)	440	10	
19	D19S197	g116	CA	P	87(NA)	539	11	
19	D19S198	m133	CA	P	72(NA)	498	11	
19	D19S199	ms231	CA	P	83(NA)	395	11	
19	D19S200	ms265	CA	P	83(NA)	162	11	
19	D19S204	TA4	TA4	P	58(NA)	330	12	
19	D19S227	cTBZ2-M	RU	S	55(NA)	216	13	
19	FNRBL	gem13-Bn	RU	S	NA(NA)	183	2	
19	FNRBL	gem13-Bg	RU	S	NA(NA)	71	2	
19	GPI	GPI-B	RU	S	NA(0.41)	286	2	
19	HRC	HRC	GA	P	63(NA)	376	2	
19	INSR	p12.1p1.6-Bg	RU	S	31(0.29)	141	3	
19	KLK	KLK	CA	P	66(NA)	386	14	
19	LDLR	pHHI-Pv	RU	S	40(0.32)	207	3	
19	LIPE	LIPE	CA	P	73(NA)	415	15	
19	PRKCG	PKCG-M	RU	S	55(0.57)	277	3	
19	RYR1	RYR1	CA	P	43(0.38)	262	16	
19	TRSP	TRSP-Ss	RU	S	NA(0.33)	178	3	
19		CMCC037-Bg	RU	S	69(NA)	274	13	
19		CMCC037-T	RU	S	66(NA)	140	13	
19		pMS207-Mb	RU	S	65(NA)	367	13	
20q12-q13.11	ADA	ADA	AA	P	70(0.64)	477	1; 2	
20q12-q13.11	ADA	ADA	RU	S	3(0.03)	24	3; 2	
20q13.2	D20S4	pMS1-27-M	RU	S	49(0.38)	381	4; 5	
20p12	D20S5	PR12.21-M	RU	S	43(0.34)	357	4; 5	
20p12	D20S5	pRI2.21-Pv	RU	S	46(0.36)	63	4; 5	
20	D20S15	CRI-L355-Bg	RV	S	87(0.85)	315	6	
20	D20S16	CRI-L1214-Bg	RR	S	81(0.78f)	324	6	
20q12-q13.1	D20S17	CRI-L127-M	RU	S	49(0.37)	126	7; 8	
20q12-q13.1	D20S17	L127-CA12	CA	P	63(0.57)	366	9; 8	
20p11.22-p11.21	D20S18	CRI-L1239-M	RU	S	46(0.36)	117	7; 8	
20q	D20S19	PCMM6-P	RV	S	84(0.82)	719	10	
20q	D20S20	PRMR6-T	RU	S	39(0.31)	288	11	
20q12-q13.2	D20S22	pFMS22-1.4-M	RU	S	66(0.58)	361	12; 13	
20p12-p11.2	D20S23	pFMS76-M	RU	S	34(0.29)	170	14; 13	
20q13.3-qter	D20S24	IP20K09-T	RU	S	59(0.50)	260	15; 16	
20q13.3-qter	D20S25	IP20K061-M	RU	S	50(0.37)	188	17; 16	
20	D20S25	IP20M61	CA	P	84(0.82)	223	18	
20q	D20S26	ms617-A	RV	S	70(0.64)	491	19; 19	
20p12	D20S27	Mfd25	CA	P	71(0.66)	408	20; 21	
20q13.1	D20S33	CEB2-Hf	RV	S	73(0.68)	379	22; 22	
20	D20S39	IP20M41	CA	P	56(0.53)	117	18	
20	D20S40	IP20M43	CA	P	55(0.48)	161	18	
20	D20S41	IP20M57	CA	P	82(0.80)	188	18	
20	D20S42	IP20M62	CA	P	84(0.82)	201	18	
20	D20S43	IP20M66	CA	P	58(0.54)	130	18	
20	D20S44	IP20M71	CA	P	60(0.52)	131	18	
20	D20S45	IP20M83	CA	P	76(0.73)	199	18	
20	D20S46	IP20M77	CA	P	81(0.79)	221	18	
20	D20S47	IP20M73	CA	P	46(0.36)	176	18	

Table 1. (continued)

Location	Locus	System-enz	HET%				NIM	Citations	
			Pm type	AM	(PIC)	NIM			
20	D20S48	IP20M12	CA	P	84(0.82)	201	18		
20	D20S50	IP20M29	CA	P	71(0.69)	222	18		
20	D20S51	IP20M37	CA	P	21(0.20)	60	18		
20	D20S52	IP20M48	CA	P	83(0.81)	182	18		
20	D20S53	IP20M78	CA	P	23(0.20)	71	18		
20	D20S54	IP20M85	CA	P	73(0.68)	187	18		
20	D20S55	IP20M3	CA	P	77(0.74)	150	18		
20	D20S56	IP20M6	CA	P	71(0.66)	155	18		
20	D20S57	IP20M7	CA	P	64(0.58)	128	18		
20	D20S58	IP20M14	CA	P	67(0.60)	182	18		
20	D20S59	IP20M17	CA	P	80(0.77)	217	18		
20	D20S60	IP20M1	CA	P	69(0.64)	178	18		
20	D20S61	IP20M23	CA	P	73(0.69)	217	18		
20	D20S62	IP20M25	CA	P	47(0.39)	140	18		
20	D20S63	IP20M28	CA	P	79(0.76)	198	18		
20	D20S64	IP20M5	CA	P	82(0.80)	74	18		
20	D20S65	Mfd134	CA	P	51(0.48)	323	21		
20	D20S66	Mfd136	CA	P	80(0.77)	494	21		
20q	D20S73	pMS214-A	RV	S	69(0.64)	493	23; 23		
20	D20S75	MIT-M27	CA	P	86(0.84)	535	24		
20	D20S82	Fr8-7-E	RR	S	60(0.53)	367	4; 4		
20	D21S112	CRI-L427-R	RV	S	95(0.93)	298	5; 6		
20	D21S120	B37	GT	P	71(0.66)	446	7; 7		
20	D21S167	c102A0322	GT	P	82(0.81)	371	8		
20	D21S171	Mfd95	GT	P	72(0.71)	430	9; 9		
20	D21S210	GT12	GT	P	83(0.82)	312	10		
20	D21S212	GT10	GT	P	84(0.84)	559	10		
20	D21S214	GT02	GT	P	82(0.81)	408	10		
20	D21S231	GT15	GT	P	74(0.72)	332	10		
20	D21S232	HMG14	GT	P	74(0.69)	326	11; 11		
20	D21S233	IFNAR	Tet	P	80(0.79)	213	12; 13		
20	D22S85	KI-106-T	RS	S	44(0.36)	323	3; 8		
20	D22S90	KI-185-H	RS	S	45(0.37)	347	3; 8		
20	D22S92	KI-218-H	RS	S	49(0.37)	333	3; 8		
20	D22S94	KI-1105-T	RS	S	36(0.28)	302	3; 8		
20	D22S97	KI-260-T	RS	S	57(0.37)	407	3; 8		
20	D22S102	KI-436-T	RS	S	57(0.37)	264	3; 8		
20	D22S156	Mfd33	CA	P	78(0.63)	294	9		
20	D22S257	Mfd51	CA	P	67(0.46)	380	10		
20	D22S257	F8VWFP	CA	P	40(0.35)	302	11; 12		
20	D22S257	F8VWFP-2	Tet	P	40(0.35)	302	11; 12		
20	D22P1	F8VWFP	PH	P	70(0.65)	405	11; 12		
20	G22P1	G22P1-Ss	RS	S	30(0.26)	179	13		
20	G22P1	IL2RB	CA	P	84(0.71)	424	14; 15		
20	G22P1	MB	MB	P	45(0.36)	344	16; 16		
20	D22P2	pHM27.B2.9-T	RS	S	49(0.36)	176	1; 17		
20	D22P2	SIS	CA	P	57(0.47)	511	1; 17		
20	D22P2	TOP1P2	CA	P	92(0.81)	520	18; 19		
20q	Xq11.2-q13.1	AR	pCMVAR-H	RS	S	18(0.37)	90	1; 2	
20p12	Xq13.1	CCG1	B-Er	RS	S	8(0.11)	46	3; 2	
20	Xp21	DMD	NA	CA	P	76(NA)	397	4; 5	
20	Xq21.3-q22	DXS3	p19-2	CA	P	38(0.44)	523	6; 7	
20	Xp11.3	DXS7	L1.28-T	R	S	58(0.51)	285	8; 9	
20	Xpter-p22.11	DXS9	1RC8-T	RS	S	100(0.57)	94	10; 9	
20	X	DXS11	22-33-T	RS	S	10(0.37)	446	11	
20	Xp11.21-cen	DXS14	p58-1-M	RS	S	28(0.40)	186	12; 2	
20	Xq28-qter	DXS15	DX13-Bg	RS	S	71(0.57)	392	13; 14	
20	X	DXS16	XUT23-Bg,M	RH	S	62(0.57)	280	15	
20	X	DXS17	S21-T	RS	S	33(0.56)	176	16	
20	X	DXS41	p99-6-P	RS	S	46(0.51)	257	17	

Table 1. (continued)

Location	Locus	System-enz	Pm type	AM	HET% (PIC)	NIM	Citations
X	DXS42	p43-15-Bg	RS	S	100(0.58)	162	18
X	DXS43	pD2-Pv	RS	S	54(0.55)	246	19
Xq26.2-q26.3	DXS51	52A-T	RS	S	61(0.56)	413	20; 21
Xq28-qter	DXS52	ST14-T	RV	S	77(0.79)	368	22; 23
Xq11.2-q13.1	DXS62	MGU22-H	RS	S	6(0.31)	28	2; 2
Xq21.1-q21.3	DXS72	pX65H7-H	RS	S	47(0.50)	218	24; 2
Xq26-q27	DXS79	07-03-Bn	RS	S	44(0.55)	70	25; 14
X	DXS85	782-E	RS	S	24(0.43)	76	26
Xq26	DXS86	St1-Bg	RS	S	100(0.55)	16	27; 14
X	DXS88	G3-1-Bg	RS	S	40(0.42)	146	28
X	DXS89	pTAK10-M	RS	S	20(0.30)	115	10
X	DXS94	pXG-12-P	RS	S	42(0.51)	219	10
X	DXS100	pX45h-T	RS	S	25(0.40)	153	29
Xq26	DXS102	cX38-1-T	RS	S	37(0.47)	120	30; 31
X	DXS105	cX55-7-T	RS	S	31(0.47)	113	32
Xq11.2-q13.1	DXS106	cpX203-Bg	RS	S	41(0.52)	255	33; 2
Xq11.2-q13.1	DXS132	cpX23-Dr	RS	S	42(0.54)	263	3; 2
X	DXS143	dic56-Bc	RS	S	57(0.53)	252	16
X	DXS144	c11-T	RS	S	50(0.55)	209	34
Xp11.23-p11.22	DXS146	pTAK8-X	RS	S	32(0.49)	204	35; 2
Xq11.2-q13.1	DXS153	cX37.1-Bs	RS	S	41(0.47)	236	10; 2
Xq11.2-q13.1	DXS159	cpX289-P	RS	S	49(0.54)	335	36; 2
X	DXS164	pERT87.15-T	RS	S	40(0.49)	264	37
Xq21.33-q22	DXS178	p212-T	RS	S	45(0.49)	373	7; 7
Xpter-p22	DXS207	pPA4B-Xb	RS	S	51(0.54)	308	38; 38
Xp21.1-p11.3	DXS228	1aA6	CA	P	50(0.69)	243	9; 2
Xp11.23-p11.22	DXS255	M27B-E	RV	S	84(0.69)	698	39; 2
X	DXS274	CRI-L1391-M	RU	S	64(0.58)	178	40
X	DXS287	pYNH3-R	RS	S	43(0.57)	628	41
X	DXS292	VK14AC	CA	P	51(0.63)	337	42
X	DXS296	VK21C-M	RS	S	22(0.53)	112	22

Table 1. (continued)

Location	Locus	System-enz	Pm type	AM	HET% (PIC)	NIM	Citations
Xq27-q28	DXS297	VK23AC	CA	P	68(0.65)	452	42; 14
X	DXS425	NA	CA	P	83(0.68)	460	43
Xp11.3-p11.23	DXS426	426	CA	P	61(0.60)	296	43; 2
X	DXS428	CRI-C6-P	RU	S	64(0.57)	206	40
X	DXS451	NA	CA	P	43(0.38)	44	44
X	DXS454	Mfd72	CA	P	28(0.45)	200	45
X	DXS456	XG30B	CA	P	78(0.63)	166	43
X	DXS548	NA	CA	P	38(0.30)	40	46
X	DXS731	MIT-MS266	CA	P	75(0.65)	182	47
X	DXS737	MIT-MS120	CA	P	64(0.61)	163	47
X	DXS738	MIT-E114	CA	P	20(NA)	240	47
Xq13-q21.1	DXYS1	pDP34-T	RS	S	71(0.58)	401	48; 49
X	DXYS12	S25-1-T	RS	S	40(0.54)	169	7
X	DXYS13	pTAK2-M	RS	S	17(0.28)	98	50
Xp11.21-q11.1	DXZ1	pBAMX-E	RS	S	100(0.56)	270	3; 2
Xq28-qter	F8C	F8C-Bc	RS	S	100(0.57)	98	51; 14
X	F9	F9-T	RS	S	39(0.56)	206	22; 31
Xq26	HPRT	HPRT	Tet	P	76(0.62)	458	21; 31
X	DXYS13	pSP7-PKG-Bg	RS	S	41(0.46)	278	3; 2
Xp22.32	KAL	KAL	CA	P	38(0.38)	35	52; 53
Xp11.4-p11.23	MAOA	MAO	CA	P	65(0.64)	285	54; 55
Xp11.3-p11.23	OATL1	HuoAT6-Sc	RS	S	69(0.56)	417	56; 2
Xp11.3-p11.23	PFC	PROP	CA	P	65(0.64)	350	57; 2
Xq13.2-q21.1	PGK1	pSP7-PKG-Bg	RS	S	41(0.46)	278	3; 2
Xp11.23-p11.22	SYP	49E-109	RS	S	45(0.50)	210	58; 2
Xp11.23-p11.22	TFE3	TFE3-R	RS	S	39(0.58)	294	59; 2
Xp11.3-p11.23	TIMP	TIMP-Bg	RS	S	55(0.50)	333	3; 60
X	msn120	CA	P	38(0.42)	210	61	
X	NB94-MZ19	CA	P	100(NA)	124	62	

**Chromosome 1**

1. HH 38:22 (1988)
2. G 2:139 (1988)
3. NAR 16:2361 (1988)
4. AJHG 43:462 (1988)
5. PNAS 80:6932 (1983)
6. AJHG 44:388 (1989)
7. HG 79:283 (1988)
8. L 1:771 (1985)
9. G 2:128 (1988)
10. NAR 24:8569 (1983)
11. CCG 39:67 (1985)
12. NAR 17:6433 (1989)
13. JEM 166:246 (1987)
14. JEM 167:669 (1988)
15. JEM 164:1531 (1986)
16. JBC 264:2118 (1989)
17. NAR 18:4635 (1990)
18. I 24:171 (1986)
19. AJHG 51:269 (1987)
20. G 3:161 (1988)
21. C 51:319 (1987)
22. NAR 16:4747 (1988)
23. NAR 15:9620 (1987)
24. NAR 16:14741 (1988)
25. G 4:12 (1989)
26. NAR 16:9370 (1988)
27. NAR 16:9368 (1988)
28. NAR 16:5704 (1988)
29. NAR 15:9621 (1987)
30. NAR 15:9622 (1987)
31. HDKPC
32. NAR 16:9367 (1988)
33. NAR 16:9364 (1988)
34. NAR 16:9363 (1988)
35. NAR 16:11854 (1988)
36. NAR 17:5420 (1989)
37. NAR 17:5422 (1986)
38. NAR 18:2199 (1990)
39. NAR 18:2835 (1990)
40. HG 77:175 (1987)
41. NAR 15:2537 (1987)
42. G 1:43 (1987)
43. CCG 46:626 (1987)
44. JV 58:955 (1986)
45. HG 79:235 (1988)
46. HG 81:157 (1989)
47. NAR 15:9089 (1987)
48. SCMG 14:407 (1988)
49. G 3:124 (1988)
50. PNAS 82:6595 (1985)
51. NAR 14:9543 (1986)
52. CCG 43:103 (1986)
53. D 36:546 (1987)
54. PNAS 85:7293 (1988)
55. CCG 51:986 (1988)
56. NAR 17:2301 (1989)
57. HG 85:376 (1990)
58. G 3:393 (1988)
59. AHG 51:289 (1987)
60. N 318:69 (1985)
61. CCG 40:694 (1985)
62. PNAS 81:4213 (1984)
63. NAR 15:4761 (1987)
64. NAR 15:9623 (1987)
65. SCMG 11:149 (1985)
66. PNAS 89:411 (1992)
67. NAR 14:8697 (1986)
68. AJHG 37:1117 (1985)
69. CCG 45:55 (1987)
70. SCMG 10:415 (1984)
71. HG 86: 398 (1991)
72. NAR 17:8896 (1989)
73. G 7:503 (1990)
74. NAR 15:4696 (1987)
75. PNAS 82:3790 (1985)
76. G 7:97 (1990)
77. PNAS 83:1822 (1986)
78. Chromosome 2
1. G 5:738 (1989)
2. HG 71:259 (1985)
3. HDKPC
4. BBRC 131:1003 (1985)
5. WMC5
6. NAR 14:7817 (1986)
7. JEM 161:429 (1985)
8. NAR 19:1718 (1991)
9. PTC5
10. HG 73:64 (1986)
11. JPC5
12. HG 73:17 (1986)

**Chromosome 3**

13. C 51:319 (1987)
14. EJL 18:1901 (1988)
15. AHG 50:361 (1986)
16. AJHG 38:288 (1986)
17. NAR 13:5403 (1985)
18. PNAS 82:3761 (1985)
19. AJHG 37:1015 (1985)
20. NAR 15:5907 (1987)
21. NAR 15:5908 (1987)
22. NAR 15:10076 (1987)
23. RWC5
24. NAR 17:469 (1989)
25. NAR 17:5424 (1989)
26. NAR 18:2203 (1990)
27. NAR 18:2200 (1990)
28. JWPC
29. G 11:135 (1991)
30. G 13:622 (1992)
31. NAR 19:688 (1991)
32. CCG 38:76 (1984)
33. HG 74:420 (1986)
34. B 73:104 (1989)
35. CCG 48:63 (1988)
36. CCG 51:1026 (1989)
37. JMC5
38. CCG 42:94 (1986)
39. HMG 1:137 (1992)
40. CCG 47:170 (1988)
41. SNTW
42. CCG 52:68 (1989)
43. AJHG 38:428 (1986)
44. CCG 37:454 (1984)
45. NAR 19:3759 (1991)
46. CCG 40:659 (1985)
47. C 51:319 (1987)
48. JCI 84:1013 (1989)
49. NAR 16:9185 (1988)
50. NAR 16:2743 (1988)
51. AJHG 43:854 (1988)
52. G 6:1 (1990)
53. JMuTW
54. JMG 27:426 (1990)
55. G 13:622 (1992)
56. J Murray, unpub
57. J Murray et al, sub
58. PNAS 80:6932 (1983)
59. Chromosome 4
1. AJHG 42:490 (1988)
2. CCG 40:748 (1985)
3. AJHG 35:565 (1983)
4. Wijmenga et al, sub
5. Mills et al, G 1 p
6. NAR 19:1723 (1991)
7. CCG 51:990 (1989)
8. NAR 17:8994 (1989)
9. NAR 19:2516 (1991)
10. CCG 51:973 (1989)
11. AJHG 48:911 (1991)
12. HG 68:154 (1984)
13. NAR 13:3016 (1985)
14. S 238:950 (1987)
15. AJHG 42:125 (1988)
16. CCG 51:1082 (1989)
17. NAR 16:1648 (1988)
18. AJHG 42:335 (1988)
19. C 51:319 (1987)
20. JCI 84:1013 (1989)
21. NAR 16:9185 (1988)
22. NAR 16:2743 (1988)
23. AJHG 43:854 (1988)
24. G 6:1 (1990)
25. JMuTW
26. JMG 27:426 (1990)
27. G 13:622 (1992)
28. J Murray, unpub
29. J Murray et al, sub
30. PNAS 80:6932 (1983)

- |     |                      |     |                             |     |                     |     |                      |                      |
|-----|----------------------|-----|-----------------------------|-----|---------------------|-----|----------------------|----------------------|
| 31. | CCG 52:77 (1989)     | 35. | CCG 51:1116 (1989)          | 17. | NAR 16:3590 (1988)  | 17. | SCMG 13:315 (1987)   |                      |
| 32. | NAR 18:7198 (1991)   | 36. | CCG 43:218 (1986)           | 18. | CCG 58:382 (1991)   | 18. | AJHG 41:616 (1987)   |                      |
| 33. | Mills et al., sub    | 37. | M-CKC5                      | 19. | AJHG 44:671 (1989)  | 19. | RWCS                 |                      |
| 34. | AJHG 36:760 (1984)   | 38. | CCG 48:25 (1988)            | 20. | AJHG 44:388 (1989)  |     | <b>Chromosome 11</b> |                      |
| 35. | S 242:1306 (1988)    | 39. | H 271:141 (1975)            | 21. | NAR 18:4038 (1990)  | 1.  | G 7:633 (1990)       |                      |
| 36. | HH 27:105 (1977)     | 40. | CCG 40:787 (1985)           | 22. | NAR 19:1725 (1991)  | 2.  | CCG 58:459 (1991)    |                      |
| 37. | NAR 17:8895 (1989)   | 41. | PNAS 81: 2816 (1984)        | 23. | G 13:232 (1992)     | 3.  | CCG 51:622 (1989)    |                      |
| 38. | PNAS 83:1665 (1986)  | 42. | EMBO J 2:121 (1983)         | 24. | NAR 19:6664 (1991)  | 4.  | NAR 18:4036 (1990)   |                      |
| 39. | Stadler et al., sub  | 43. | HG 75:123 (1987)            | 25. | SWPC                | 5.  | AJHG 36:1159 (1984)  |                      |
| 40. | HG 84:473 (1990)     | 44. | SCMG 13:119 (1987)          | 26. | G 11:135 (1991)     | 6.  | CCG 51: 226 (1989)   |                      |
| 41. | JBC 262:10065 (1987) | 45. | NAR 16:1652 (1988)          | 27. | GVC5                | 7.  | NAR 14:1920 (1986)   |                      |
| 42. | CCG 51:1046 (1989)   | 46. | SCMG 11:149 (1985)          | 28. | HDKTW               | 8.  | G 7:335 (1990)       |                      |
| 43. | PNAS 84:2868 (1987)  | 47. | AJHG 42:839 (1988)          | 29. | HG 80:299 (1988)    | 9.  | G 2:66 (1988)        |                      |
| 44. | NAR 16:4740 (1988)   | 48. | CCG 41:129 (1986)           | 30. | G 1:138 (1987)      | 10. | NAR 18:5921 (1990)   |                      |
| 45. | CCG 39:109 (1985)    | 49. | NAR 14:1928 (1986)          | 31. | NAR 18:4958 (1991)  | 11. | C 51:319 (1987)      |                      |
| 46. | NAR 15:380 (1987)    | 50. | NAR 15:3941 (1987)          | 32. | CCG 58:1932 (1991)  | 12. | CCG 58:1190 (1991)   |                      |
| 47. | S 223:71 (1984)      | 51. | PNAS 81:3167 (1984)         | 33. | PNAS 79:7842 (1982) | 13. | PNAS 87:6639 (1990)  |                      |
| 48. | G 7:491 (1990)       | 52. | PNAS 83:2556 (1986)         | 34. | NAR 16:4184 (1988)  | 14. | NAR 16:7210 (1988)   |                      |
| 49. | JCB 43:255 (1990)    | 53. | AJHG 40:338 (1987)          | 35. | CCG 45:30 (1987)    | 15. | AJHG 48:258 (1991)   |                      |
| 50. | NDPC                 | 54. | CCG 40:756 (1985)           | 36. | NAR 18:2200 (1990)  | 16. | G 13:129 (1992)      |                      |
| 51. | JWPC                 | 55. | NAR 15:7654 (1987)          | 37. | NAR 19:6058 (1991)  | 17. | NAR 18:7470 (1990)   |                      |
| 52. | RMPC                 | 56. | Church et al., G i p (1992) | 38. | CCG 40:784 (1985)   | 18. | S 24:64 (1990)       |                      |
|     |                      | 57. | G 12:826 (1992)             | 39. | MBM 2:251 (1984)    | 19. | Litt et al., sub     |                      |
|     |                      | 58. | EMBO J 6:1967 (1987)        | 40. | PNAS 84:503 (1987)  | 20. | G 11:720 (1991)      |                      |
|     |                      | 59. | G 10:921 (1991)             | 41. | CCG 46:589 (1987)   | 21. | JWPC                 |                      |
|     |                      |     |                             | 42. | ABC5                | 22. | PHPC                 |                      |
|     |                      |     |                             | 43. | N 317: 175 (1985)   | 23. | G 13:622 (1992)      |                      |
|     |                      |     |                             | 44. | RWC5                | 24. | MLTW                 |                      |
|     |                      |     |                             | 45. | TKC5                | 25. | G 10:527 (1991)      |                      |
|     |                      |     |                             |     |                     | 26. | AJHG 45:778 (1989)   |                      |
|     |                      |     |                             |     |                     | 27. | MBM 1:199 (1983)     |                      |
|     |                      |     |                             |     |                     | 28. | HG 77:280 (1987)     |                      |
|     |                      |     |                             |     |                     | 29. | HKDC5                |                      |
|     |                      |     |                             |     |                     | 30. | G 6:316 (1990)       |                      |
|     |                      |     |                             |     |                     | 31. | NAR 16:9890 (1988)   |                      |
|     |                      |     |                             |     |                     |     |                      |                      |
|     |                      |     |                             |     |                     |     | <b>Chromosome 12</b> |                      |
|     |                      |     |                             |     |                     |     | 1.                   | NAR 13:6787 (1985)   |
|     |                      |     |                             |     |                     |     | 2.                   | CCG 48:58 (1988)     |
|     |                      |     |                             |     |                     |     | 3.                   | NAR 13:8287 (1985)   |
|     |                      |     |                             |     |                     |     | 4.                   | RWCS                 |
|     |                      |     |                             |     |                     |     | 5.                   | HG 78:363 (1988)     |
|     |                      |     |                             |     |                     |     | 6.                   | G 1:293 (1987)       |
|     |                      |     |                             |     |                     |     | 7.                   | HG 66:14 (1990)      |
|     |                      |     |                             |     |                     |     | 8.                   | G 1:93 (1987)        |
|     |                      |     |                             |     |                     |     | 9.                   | HG 72:86 (1986)      |
|     |                      |     |                             |     |                     |     | 10.                  | NAR 17:4925 (1989)   |
|     |                      |     |                             |     |                     |     | 11.                  | NAR 16:778 (1988)    |
|     |                      |     |                             |     |                     |     | 12.                  | NAR 16:3596 (1988)   |
|     |                      |     |                             |     |                     |     | 13.                  | NAR 16:3118 (1988)   |
|     |                      |     |                             |     |                     |     | 14.                  | NAR 16:779 (1988)    |
|     |                      |     |                             |     |                     |     | 15.                  | C 51:319 (1987)      |
|     |                      |     |                             |     |                     |     | 16.                  | NAR 16:8749 (1988)   |
|     |                      |     |                             |     |                     |     | 17.                  | NAR 18:1664 (1990)   |
|     |                      |     |                             |     |                     |     | 18.                  | J Weber et al G i p  |
|     |                      |     |                             |     |                     |     | 19.                  | NAR 19:2512 (1991)   |
|     |                      |     |                             |     |                     |     | 20.                  | NAR 19:4013 (1991)   |
|     |                      |     |                             |     |                     |     | 21.                  | C 13:622 (1992)      |
|     |                      |     |                             |     |                     |     | 22.                  | CCG 46:672 (1987)    |
|     |                      |     |                             |     |                     |     | 23.                  | S 228:1401 (1985)    |
|     |                      |     |                             |     |                     |     | 24.                  | WNPC                 |
|     |                      |     |                             |     |                     |     | 25.                  | NAR 16:4957 (1990)   |
|     |                      |     |                             |     |                     |     | 26.                  | N 310:775 (1984)     |
|     |                      |     |                             |     |                     |     | 27.                  | CCG 41:245 (1986)    |
|     |                      |     |                             |     |                     |     | 28.                  | MBM 1:199 (1983)     |
|     |                      |     |                             |     |                     |     | 29.                  | SCMG11:149 (1985)    |
|     |                      |     |                             |     |                     |     | 30.                  | M-CKC5               |
|     |                      |     |                             |     |                     |     |                      |                      |
|     |                      |     |                             |     |                     |     |                      | <b>Chromosome 10</b> |
|     |                      |     |                             |     |                     |     | 1.                   | G 6:393 (1990)       |
|     |                      |     |                             |     |                     |     | 2.                   | HG 87:621 (1991)     |
|     |                      |     |                             |     |                     |     | 3.                   | G 2:157 (1988)       |
|     |                      |     |                             |     |                     |     | 4.                   | G 5:718 (1989)       |
|     |                      |     |                             |     |                     |     | 5.                   | M-CKC5               |
|     |                      |     |                             |     |                     |     | 6.                   | G 3:389 (1988)       |
|     |                      |     |                             |     |                     |     | 7.                   | JMTW                 |
|     |                      |     |                             |     |                     |     | 8.                   | G 12:604 (1992)      |
|     |                      |     |                             |     |                     |     | 9.                   | GVP                  |
|     |                      |     |                             |     |                     |     | 10.                  | G 13:622 (1992)      |
|     |                      |     |                             |     |                     |     | 11.                  | PNAS 85:7164 (1988)  |
|     |                      |     |                             |     |                     |     | 12.                  | HG 83:383 (1989)     |
|     |                      |     |                             |     |                     |     | 13.                  | AHG 53:15 (1989)     |
|     |                      |     |                             |     |                     |     | 14.                  | S 228:1547 (1985)    |
|     |                      |     |                             |     |                     |     | 15.                  | AJHG 43:922 (1988)   |
|     |                      |     |                             |     |                     |     | 16.                  | S 230:672 (1985)     |
|     |                      |     |                             |     |                     |     |                      |                      |
|     |                      |     |                             |     |                     |     |                      | <b>Chromosome 13</b> |
|     |                      |     |                             |     |                     |     | 1.                   | NAR 18:205 (1990)    |
|     |                      |     |                             |     |                     |     | 2.                   | G 2:128 (1988)       |
|     |                      |     |                             |     |                     |     | 3.                   | G 12:430 (1992)      |
|     |                      |     |                             |     |                     |     | 4.                   | PNAS 85:2701 (1988)  |
|     |                      |     |                             |     |                     |     | 5.                   | AJHG 38:38 (1986)    |
|     |                      |     |                             |     |                     |     | 6.                   | AJHG 42:309 (1988)   |
|     |                      |     |                             |     |                     |     | 7.                   | AJHG 36:10 (1984)    |
|     |                      |     |                             |     |                     |     | 8.                   | G 12:852 (1992)      |

9. HG 71:192 (1985)  
 10. HG 65:320 (1984)  
 11. CCG 44:236 (1987)  
 12. NAR 14:3148 (1986)  
 13. H Scheffer, unpub  
 14. NAR 14:4374 (1986)  
 15. NAR 17:8399 (1989)  
 16. NAR 15:382 (1987)  
 17. NAR 17:8399 (1989)  
 18. NAR 18:7194 (1991)  
 19. CCG 57:87 (1991)  
 20. NAR 16:2745 (1988)  
 21. CGC 13:283 (1984)  
 22. CCG 46:575 (1987)  
 23. CCG 46:648 (1987)  
 24. RWC5  
 25. NAR 16:5219 (1988)  
 26. NAR 16:10402 (1988)  
 27. NAR 16:10401 (1988)  
 28. NAR 16:3119 (1988)  
 29. NAR 16:3597 (1988)  
 30. NAR 16:3594 (1988)  
 31. C 51:319 (1987)  
 32. NAR 17:8396 (1989)  
 33. G 11:517 (1991)  
 34. NAR 17:8397 (1989)  
 35. AJHG 37:635 (1985)  
 36. CCG 51:1065 (1989)  
 37. NAR 18:4638 (1990)  
 38. G 11:135 (1991)  
 39. G 13:622 (1992)  
 40. Bowcock et al, sub  
 41. DSPC  
 42. G 7:110 (1990)  
 43. PNAS 84:1075 (1987)  
 44. DHBGs (1976)  
 45. AJHG 38:567 (1986)  
 46. HG 66:230 (1984)  
 47. SCMG 16:567 (1990)  
 48. NAR 17:8400 (1989)  
 49. HG 86:238 (1990)  
 50. PNAS 84:8370 (1987)  
 51. NEJM 318:151 (1988)  
 52. PNAS 85:2210 (1988)  
 53. HDKPC  
 54. G 1:93 (1987)  
 55. G 9:141 (1990)  
 56. CCG 41:193 (1986)
- Chromosome 14**
- HDKTW
  - PNAS 87: 960 (1990)
  - PNAS 77:6754 (1980)
  - G 6:33 (1990)
  - NAR 14:9225 (1986)
  - G 4:76 (1989)
  - NAR 16:380 (1988)
  - NAR 16:379 (1988)
  - NAR 16:10400 (1988)
  - NAR 16:5220 (1988)
  - C 51:319 (1987)
  - AJHG 47:A203 (1990)
  - AJHG 44:182 (1989)
  - NAR 19:1171 (1991)
  - NAR 19:1722 (1991)
  - NAR 19:4308 (1991)
  - G 13:532 (1992)
  - NAR 15:3845 (1987)
  - HMG 1:136 (1992)
  - AJMG 32:279 (1989)
  - N 316:79 (1985)
  - PNAS 84:9098 (1987)
  - S 227:1044 (1985)
  - G 11:1063 (1991)
  - DNTR
  - G 12:377 (1992)
  - ABC5
- Chromosome 15**
- AJHG 44:397 (1989)
  - PNAS 81:1813 (1984)
  - G 9:278 (1991)
  - NAR 19:195 (1991)
  - CCG 46:696 (1987)
  - NAR 15:5901 (1987)
  - CCG 58:624 (1991)
  - HDKC5
  - CCG 32:314 (1982)
  - CCG 40:6090 (1985)
  - G 3:342 (1988)
  - HG 69:201 (1985)
  - AJHG 37:635 (1985)
  - HMG 1:139 (1992)
  - NAR 16:8740 (1988)
  - NAR 16:1226 (1988)
  - RWC5
  - NAR 16:780 (1988)
  - NAR 16:10944
  - NAR 16:1224 (1988)
  - NAR 16:1225 (1988)
  - NAR 16:10941 (1988)
  - NAR 16:3592 (1988)
  - NAR 16:3595 (1988)
  - NAR 16:1988 (1988)
  - NAR 16:10943 (1988)
  - NAR 16:10942 (1988)
  - NAR 16:10946 (1988)
  - C 51:319 (1987)
  - NAR 17:7121 (1989)
  - G 8:501 (1990)
  - NAR 18:4640 (1990)
  - G 13:622 (1992)
  - VLPc
  - JWPC
  - ABTW
  - N 352:330 (1991)
  - HMG 1:67 (1992)
  - CCG 51:1026 (1989)
  - NAR 18:7467 (1990)
  - G 7:123 (1990)
  - G 12:183 (1992)
  - Dracopoli, unpub
  - NAR 17:5417 (1989)
  - Chromosome 16**
  - G 6:419 (1990)
  - G 13:1178 (1992)
  - SCMG 10:359 (1984)
  - HG 79:277 (1989)
  - HG 74:425 (1986)
  - NAR 16:9065 (1988)
  - NAR 17:2146 (1989)
  - NAR 16:9066 (1988)
  - PNAS 87:5754 (1990)
  - NAR 17:4905 (1989)
  - N 317:542 (1985)
  - AJHG 43:249 (1988)
  - HG 83:61 (1989)
  - NAR 17:6430 (1989)
  - NAR 17:8017 (1989)
  - NAR 17:8402 (1989)
  - NAR 17:7542 (1989)
  - NAR 17:8021 (1989)
  - NAR 17:8012 (1989)
  - NAR 17:9506 (1989)
  - NAR 19:6964 (1991)
  - NAR 18:4034 (1990)
  - NAR 19:6664 (1991)
  - G 13:402 (1992)
  - Chromosome 17**
  - G 2:302 (1988)
  - CCG 58:1555 (1991)
  - C 36:131 (1984)
  - AJHG 43: 587 (1988)
  - NAR 16:3598 (1988)
  - NAR 15:9097 (1987)
  - NAR 15:9096 (1987)
  - NAR 16:784 (1988)
  - NAR 16:786 (1988)
  - NAR 16:785 (1988)
  - O'Connell et al, G i p
  - NAR 16:782 (1988)
  - NAR 16:5707 (1988)
  - NAR 16:783 (1988)
  - NAR 15:10605 (1987)
  - CCG 58:1567 (1991)
  - G 1:353 (1987)
  - CCG 46:576 (1987)
  - CCG 51:957 (1989)
  - Chromosome 20**
  - PNAS 87:2951 (1990)
  - HG 66:292 (1984)
  - AJHG 44:864 (1989)
  - CCG 40:645 (1985)
  - CCG 44:112 (1987)
  - AJHG 42:143 (1988)
  - C 51:319 (1987)
  - CCG 58:2032 (1991)
  - Rothschild et al, sub
  - NAR 16:5222 (1988)
  - NAR 16:9883 (1988)
  - NAR 18:1665 (1990a)
  - CCG 58:2031 (1991)
  - NAR 18:1929 (1990b)
  - NAR 18:1662 (1990b)
  - EMBO J 9:505 (1990)
  - NAR 18:1661 (1990a)
  - G 12:183 (1992)
  - G 8:501 (1990)
  - Chromosome 21**
  - HMG 1:67 (1992)
  - EMBO J 9:25 (1990)
  - HMG 1:350 (1992)
  - NAR 15:5499 (1987)
  - C 51:319 (1987)
  - CCG 51:991 (1989)
  - NAR 18:4969 (1990)
  - NAR 18:4967 (1990)
  - HG 8:401 (1991)
  - Warren et al, sub
  - AJHG 48:65 (1991)
  - G 11:573 (1991)
  - JIR 10:515 (1990)
  - Chromosome 22**
  - G 4:1 (1989)
  - C 36:93 (1984)
  - G 11:709 (1991)
  - G 2:174 (1988)
  - G 10:996 (1991)
  - CCG 58:1620 (1991)
  - AJHG 50:924 (1992)
  - CCG 51:993 (1989)
  - NAR 18:4639 (1990)
  - JWC5
  - JGuTW
  - CCG 51:1058 (1989)
  - PNAS 84:503 (1987)
  - NAR 19:4022 (1991)
  - PNAS 87:3440 (1990)
  - AJHG 42:297 (1988)
  - B 63:223 (1984)
  - Trofatter et al, HMG i p
  - HG 84:6 (1989)
  - Chromosome X**
  - AJHG 44:264 (1989)
  - G 11:352 (1991)
  - G 10: 849 (1991)
  - AJHG 48:621 (1991)
  - CCG 58:2062, A27280 (1991)
  - NAR 19:4793 (1991)
  - G 1:60 (1987)
  - S 230:753 (1985)
  - HG 74:155 (1986)
  - AJHG 43:452 (1988)
  - AJHG 37:401 (1985)
  - NAR 15:6306 (1987)
  - HG 74:316 (1986)
  - AJHG 48:183 (1991)
  - CR 47:4806 (1987)
  - CG 33:162 (1988)
  - HG 78:228 (1988)
  - HG 73:264 (1986)
  - HG 73:228 (1988)
  - S 230:753 (1985)
  - AJMG 30:551 (1988)
  - G 9:37 (1991)
  - AJHG 48:1 (1991)
  - PNAS 84:6521 (1987)
  - CCG 46:665 (1987)
  - HG 83:292 (1988)
  - CCG 40:360 (1987)
  - HG 77:263 (1987)
  - NAR 14:5572 (1986)
  - HG 81:353 (1989)
  - PNAS 89:177 (1991)
  - G 4:570 (1989)
  - HG 77:23 (1987)

34. HG 81:234 (1989)  
 35. HG 81:315 (1989)  
 36. AJHG 39:438 (1986)  
 37. PNAS 83:3398 (1986)  
 38. NAR 14:7819 (1986)  
 39. NAR 15:9616 (1987)  
 40. C 51:319 (1987)  
 41. NAR 16:5705 (1988)  
 42. AJHG 48:1051 (1991)  
 43. AJHG 46:776 (1990)  
 44. MLPC (GDB)  
 45. NAR 18:4037 (1990)  
 46. C 65:905 (1991)  
 47. G 13:622 (1992)  
 48. NAR 14:5375 (1986)
49. JMG 24:14 (1987)  
 50. HG 43:452 (1988)  
 51. AJHG 44:679 (1989)  
 52. NAR 19:5453 (1991)  
 53. CCG 58:2074 (1991)  
 54. NAR 19:689 (1991)  
 55. G 5:368 (1989)  
 56. AJHG 42:365 (1988)  
 57. G 11:991 (1991)  
 58. AJHG 47:551 (1990)  
 59. NAR 19:684 (1991)  
 60. AJHG 38:819 (1986)  
 61. NDPC  
 62. JMuTW

**Journal abbreviations used in the look-up tables are:**

AJHG	Am J Hum Genet	HG	Hum Genet
AJMG	Am J Med Genet	HH.	Hum Heredity
AHG	Ann Hum Genet	HMG	Hum Mol Genet
B	Blood	I	Immunogenetics
BGiM	Blood Groups in Man	JBC	J-Biol Chem
C	Cell	JCB	J Cell Biochem
CER	Cancer Eye Res	JCEM	J Clin Endocrinol Metab
CGC	Cancer Genet Cytogenet	JCI	J Clin Invest
CR	Cancer Res	JEM	J Exp Med
CG	Clin Genet	JIR	J Interferon Res
CSHSQB	CSH Symp Quant Biol	JMG	J Med Genet
CCG	Cytogenet Cell Genet	L	Lancet
D	Diabetes	MBM	Mol Biol Med
DHBG	Dist Hum Blood Groups & Other	N	Nature

GC&C	Pms (1976)	NEJM	New Eng J Med
G	Genes, Chromosomes & Cancer	OR	Oncogene Res
Genet	Genomics	PNAS	Proc Nat Acad Sci USA
H	Genetics	S	Science
	Humangenetik	SCMG	Somat Cell Mol Genet

References to unpublished data are listed as the source collaborators' initials followed by one of the following: C5 (CEPH version 5 database), PC (personal communication), or TW (this work). GDB = Genome Data Base; sub = submitted; i p = in press; and unpub = unpublished. Initials of the collaborators in alphabetical order are:

AB	A Bale	LC-S	L Cavalli-Sforza
DB	D Bowden	M-CK	M-C King
DN	D Nickerson	ML	M Litt
DS	D Stauffer	W	Nichols
GV	G Vergnaud	ND	N Dracopoli
HD	H Drabkin	PH	P Heutink
HDK	H Donis-Keller	RL	R Leach
JA	J Armour	RM	R Myers
JG	J Gray	RW	R White
JGu	J Gusella	SA	S Antonarakis
JM	J Mao	SN	S Taylor
JMu	J Murray	SW	S Wood
JP	J Phillips	TK	T Kruse
JW	J Weber	VL	V Lauthier
KK	K Kidd	YN	Y Nakamura

NA = not available or not applicable. †Allele continuity was not maintained across families (heterozygosity is underestimated). \*Published HET values. ‡Enzymes used to detect the APO locus systems are: P, X, Xm, M, Bg, S, and Pv. §The ETS1 systems are 0.8ETS/pRD700-S; the HBB systems are 1JW151H/2JW151-H; and the PTH systems are p20.36-P/pPTH-LF- P.