

Chromosome	Marker	Avg cM	Male cM	Female cM	Heterozygosity	Lower Range (bp)	Upper Range (bp)
1	D1S468	4.22	3.54	4.46	0.75	193	213
1	D1S214	14.04	12.39	15.57	0.8	122	152
1	D1S450	20.61	21.04	20	0.81	316	340
1	D1S2667	24.68	23.19	26.18	0.82	128	156
1	D1S2697	37.05	34.04	40.41	0.7	291	305
1	D1S199	45.33	40.52	50.41	0.84	99	125
1	D1S234	55.1	45.36	65.26	0.82	268	288
1	D1S255	65.47	48.95	82.41	0.74	91	111
1	D1S2797	75.66	51.36	100.52	0.73	102	138
1	D1S2890	85.68	56.7	115.09	0.81	214	238
1	D1S230	95.31	63.1	127.72	0.79	154	166
1	D1S2841	106.45	72.16	141.34	0.78	234	254
1	D1S207	113.69	76.96	151.07	0.84	149	179
1	D1S2868	126.16	85.53	167.43	0.77	210	224
1	D1S206	134.2	93.04	176.02	0.82	208	226
1	D1S2726	144.38	100.54	188.92	0.75	284	296
1	D1S252	150.27	103.74	197.51	0.82	90	115
1	D1S498	155.89	107.29	205.24	0.82	190	212
1	D1S484	169.68	113.5	226.43	0.64	276	290
1	D1S2878	177.86	122.64	233.92	0.84	152	178
1	D1S196	181.49	127.3	236.79	0.73	322	338
1	D1S218	191.52	138.06	245.75	0.83	271	295
1	D1S238	202.73	148.74	257.48	0.86	296	330
1	D1S413	212.44	155.15	270.52	0.77	254	270
1	D1S249	220.65	159.42	282.75	0.87	163	193
1	D1S425	231.11	170.13	292.79	0.81	335	361
1	D1S213	242.34	173.33	312.16	0.86	107	133
1	D1S2800	252.12	175.46	329.82	0.79	210	224
1	D1S2785	266.27	182.96	350.61	0.77	173	187
1	D1S2842	273.46	191.69	356.24	0.78	337	359
1	D1S2836	285.75	208.5	363.91	0.78	246	260
2	D2S319	7.6	9.86	5.1	0.73	132	144
2	D2S2211	15.61	20.71	9.48	0.74	241	261
2	D2S162	20.03	25.02	14.86	0.75	124	152
2	D2S168	27.06	29.29	24.66	0.83	159	183
2	D2S305	38.87	36.81	40.8	0.72	316	338
2	D2S165	47.43	46.43	48.32	0.84	145	177
2	D2S367	54.96	50.7	59.18	0.86	309	341
2	D2S2259	64.29	54.18	74.28	0.79	322	342
2	D2S391	70.31	57.65	82.87	0.79	147	161
2	D2S337	80.69	65.65	95.73	0.88	295	319
2	D2S2368	85.48	67.78	103.2	0.83	97	121
2	D2S286	94.05	74.17	113.95	0.67	85	107
2	D2S2333	103.16	75.24	131.2	0.84	84	106
2	D2S2216	111.21	80.57	141.93	0.76	213	227
2	D2S160	122.96	88.06	157.94	0.78	210	228
2	D2S347	131.51	94.47	168.64	0.8	271	301
2	D2S112	141.62	99.8	183.77	0.72	79	95
2	D2S151	152.04	113.7	190.57	0.8	228	256
2	D2S142	161.26	120.14	202.61	0.76	239	259
2	D2S2330	169.41	129.83	209.15	0.82	171	189
2	D2S335	175.91	134.11	217.91	0.8	189	209
2	D2S364	186.21	139.47	233.25	0.8	234	260
2	D2S117	194.45	142.89	246.42	0.82	193	221

Chromosome	Marker	Avg cM	Male cM	Female cM	Heterozygosity	Lower Range (bp)	Upper Range (bp)
2	D2S325	204.53	148.01	261.55	0.81	158	186
2	D2S2382	213.49	154.41	273.37	0.81	299	337
2	D2S126	221.13	154.41	288.38	0.82	119	149
2	D2S396	232.9	169.05	297.98	0.83	236	254
2	D2S206	240.79	171.63	310.95	0.79	130	166
2	D2S338	250.54	181.7	319.99	0.79	270	294
2	D2S125	260.63	196.82	325.11	0.83	92	112
3	D3S1297	8.31	14.06	2.13	0.83	352	370
3	D3S1304	22.33	32.57	12.35	0.8	258	280
3	D3S1263	36.1	41.65	30.37	0.86	194	214
3	D3S2338	42.1	41.65	42.25	0.86	94	114
3	D3S1266	52.6	44.92	59.96	0.73	292	308
3	D3S1277	61.52	50.27	72.57	0.82	292	314
3	D3S1289	71.41	59.87	83.31	0.81	206	226
3	D3S1300	80.32	68.5	91.97	0.83	235	267
3	D3S1285	91.18	78.25	104.41	0.74	238	256
3	D3S1566	97.75	84.26	111.11	0.84	158	180
3	D3S3681	109.22	89.86	128.31	0.83	124	164
3	D3S1271	117.76	95.19	140.05	0.74	88	108
3	D3S1278	129.73	102.66	156.38	0.87	236	264
3	D3S1267	139.12	112.34	165.7	0.88	98	136
3	D3S1292	146.6	115.55	177.48	0.84	115	149
3	D3S1569	158.38	125.87	190.05	0.8	154	178
3	D3S1279	169.6	131.58	207.47	0.85	272	290
3	D3S1614	177.75	136.91	219.2	0.83	107	131
3	D3S1565	186.04	146.51	225.28	0.63	182	198
3	D3S1262	201.14	157.23	245.06	0.8	115	137
3	D3S1580	207.73	158.3	257.25	0.84	220	240
3	D3S1601	214.45	164.8	264.08	0.86	299	331
3	D3S1311	224.88	180.46	269.66	0.82	137	163
4	D4S412	4.74	7.07	2.43	0.76	161	179
4	D4S2935	13.96	16.38	11.12	0.62	90	110
4	D4S403	25.9	23.37	28.67	0.76	173	189
4	D4S419	33.42	30.93	36.19	0.77	229	249
4	D4S391	43.59	40.56	46.9	0.85	153	173
4	D4S405	56.95	44.83	69.43	0.85	284	312
4	D4S1592	69.53	48.02	91.64	0.7	117	145
4	D4S392	78.97	50.15	108.44	0.83	84	114
4	D4S2964	88.35	55.51	122.1	0.77	124	148
4	D4S1534	95.09	63.03	127.81	0.77	152	172
4	D4S414	100.75	67.31	134.95	0.89	235	253
4	D4S1572	107.95	72.67	143.89	0.84	199	217
4	D4S406	117.06	84.48	150.34	0.87	246	272
4	D4S402	124.45	89.83	159.8	0.9	112	152
4	D4S1575	132.05	96.23	168.55	0.65	292	310
4	D4S424	144.56	101.57	189	0.83	197	215
4	D4S413	157.99	110.65	206.58	0.86	286	338
4	D4S1597	169.42	115	224.82	0.74	278	304
4	D4S1539	176.19	117.64	235.59	0.67	319	327
4	D4S415	181.36	122.53	241.01	0.79	268	304
4	D4S1535	195.06	138.22	252.87	0.75	254	268
4	D4S426	206.98	155.53	259.36	0.78	163	183
5	D5S1981	1.72	3.34	0	0.74	121	131
5	D5S406	11.85	16	7.62	0.79	168	196

Chromosome	Marker	Avg cM	Male cM	Female cM	Heterozygosity	Lower Range (bp)	Upper Range (bp)
5	D5S630	19.67	24.09	15.15	0.89	287	395
5	D5S416	28.76	33.71	23.69	0.78	289	301
5	D5S419	39.99	49.78	30.09	0.82	258	290
5	D5S426	51.99	52.97	51.04	0.8	279	303
5	D5S418	58.55	54.04	63.17	0.8	212	232
5	D5S407	64.67	55.11	74.41	0.86	87	115
5	D5S647	74.07	58.32	90.52	0.83	328	368
5	D5S424	81.95	61.51	103.04	0.77	215	237
5	D5S641	92.38	68.02	118.34	0.76	301	341
5	D5S428	95.4	70.15	122.25	0.77	248	266
5	D5S644	104.76	79.76	130.83	0.85	86	116
5	D5S433	111.97	87.65	137.44	0.85	69	99
5	D5S2027	119.5	91.05	149.31	0.78	184	206
5	D5S471	129.83	97.85	163.02	0.75	241	261
5	D5S2115	138.64	107.52	170.66	0.78	146	172
5	D5S436	147.49	108.71	187.35	0.85	242	262
5	D5S410	156.47	109.91	203.76	0.78	332	354
5	D5S422	164.19	119.27	210.48	0.84	118	140
5	D5S400	174.8	124.62	226.39	0.82	221	243
5	D5S408	195.49	147.63	244.84	0.72	253	289
6	D6S1574	9.18	12.2	6.3	0.84	150	176
6	D6S309	14.07	15.43	12.88	0.84	307	333
6	D6S470	18.22	20.07	16.48	0.8	125	145
6	D6S289	29.93	30.56	29.38	0.79	163	185
6	D6S422	35.66	34.68	36.92	0.76	300	322
6	D6S276	44.41	38.05	50.92	0.83	205	237
6	D6S1610	53.81	43.39	64.36	0.84	204	218
6	D6S257	79.92	55.17	104.8	0.87	170	198
6	D6S460	89.83	62.64	117.37	0.82	283	307
6	D6S462	99.01	63.82	135.64	0.66	108	124
6	D6S434	109.19	74.38	144.77	0.86	206	250
6	D6S287	121.97	82.08	162.54	0.85	110	144
6	D6S262	130	88.53	172.16	0.83	171	191
6	D6S292	136.97	92.8	181.06	0.82	158	180
6	D6S308	144.46	94.93	194.85	0.76	328	356
6	D6S441	154.1	98.13	211	0.87	166	200
6	D6S1581	164.78	104.53	226.05	0.72	261	275
6	D6S264	179.07	120.67	239.13	0.71	113	135
6	D6S446	189	129.34	249.96	0.62	222	234
6	D6S281	190.14	131.01	249.96	0.67	136	156
7	D7S531	5.28	9.5	1.12	0.77	281	299
7	D7S517	7.44	12.73	2.19	0.83	247	265
7	D7S513	17.74	19.21	16.28	0.83	172	202
7	D7S507	28.74	26.84	30.66	0.89	86	114
7	D7S493	34.69	33.37	36.06	0.88	207	239
7	D7S516	41.69	39.84	43.59	0.75	308	328
7	D7S484	53.5	50.57	56.56	0.74	102	120
7	D7S510	59.93	53.77	66.25	0.79	85	101
7	D7S519	69.03	56.97	81.29	0.8	260	288
7	D7S502	78.65	58.04	99.5	0.85	291	311
7	D7S669	90.42	65.53	115.57	0.81	176	198
7	D7S630	98.44	74.1	123.07	0.79	328	356
7	D7S657	104.86	79.48	130.55	0.81	248	274
7	D7S515	112.32	85.88	139.09	0.83	144	206

Chromosome	Marker	Avg cM	Male cM	Female cM	Heterozygosity	Lower Range (bp)	Upper Range (bp)
7	D7S486	124.08	92.28	156.27	0.8	226	240
7	D7S530	134.55	97.09	172.04	0.78	109	127
7	D7S640	137.83	100.31	175.61	0.85	115	155
7	D7S684	147.22	105.13	189.65	0.81	344	366
7	D7S661	155.1	108.35	202.55	0.74	307	339
7	D7S636	162.33	113.69	211.38	0.9	141	177
7	D7S798	168.98	117.49	220.62	0.79	76	98
7	D7S2465	180.24	127.77	230.76	0.82	321	345
8	D8S264	0.73	1.43	0	0.83	140	164
8	D8S277	8.34	12.28	4.35	0.73	154	188
8	D8S550	21.33	19.84	22.84	0.86	191	221
8	D8S549	31.73	25.45	38.85	0.61	78	88
8	D8S258	41.55	31.2	51.13	0.7	146	160
8	D8S1771	50.05	39.24	60.86	0.77	345	369
8	D8S505	60.87	45.79	76.09	0.8	114	128
8	D8S285	71	48.98	93.15	0.78	317	333
8	D8S260	79.36	51.47	107.72	0.82	195	221
8	D8S270	103.69	60.73	146.99	0.79	107	123
8	D8S1784	118.15	67.13	169.66	0.68	280	298
8	D8S514	130	81.02	179.46	0.76	216	236
8	D8S284	143.82	89.58	198.54	0.83	275	309
8	D8S272	154.02	99.23	209.27	0.8	215	265
9	D9S288	9.83	14.71	5.46	0.85	138	158
9	D9S286	18.06	25.58	10.96	0.89	139	173
9	D9S285	29.52	33.14	26.75	0.79	85	113
9	D9S157	32.24	35.3	29.77	0.85	229	253
9	D9S171	42.73	42.86	42.6	0.79	164	188
9	D9S161	51.81	46.08	58.46	0.78	126	144
9	D9S1817	59.34	52.51	67.07	0.89	283	317
9	D9S273	65.79	52.51	80.01	0.75	206	226
9	D9S175	70.33	56.78	84.73	0.85	259	291
9	D9S167	83.41	65.35	101.67	0.86	307	341
9	D9S283	94.85	73.97	116.76	0.81	94	120
9	D9S287	103.42	82.52	126.41	0.67	299	317
9	D9S1690	106.63	86.81	127.48	0.78	230	244
9	D9S1677	117.37	91.09	144.72	0.81	234	258
9	D9S1776	123.33	95.36	152.39	0.85	176	214
9	D9S1682	132.09	103.93	161.4	0.68	152	162
9	D9S290	140.86	111.43	171.46	0.83	246	268
9	D9S164	147.91	115.22	181.29	0.81	90	106
9	D9S1826	159.61	129.76	190.63	0.69	219	233
9	D9S158	161.71	131.73	192.91	0.71	333	357
10	D10S249	2.13	0	4.63	0.74	122	144
10	D10S591	13.49	17.41	9.97	0.73	312	340
10	D10S189	19	26.92	11.5	0.72	184	200
10	D10S547	29.15	34.22	23.97	0.77	238	260
10	D10S1653	40.36	41.1	40.13	0.78	122	136
10	D10S548	45.7	42.16	49.79	0.71	186	202
10	D10S197	52.1	46.43	58.33	0.75	169	183
10	D10S208	60.64	50.68	71.18	0.79	177	197
10	D10S196	70.23	53.88	87.21	0.78	109	119
10	D10S1652	80.77	60.28	101.96	0.78	273	299
10	D10S537	91.13	69.81	114.11	0.83	143	169
10	D10S1686	105.04	81.78	128.99	0.85	247	285

Chromosome	Marker	Avg cM	Male cM	Female cM	Heterozygosity	Lower Range (bp)	Upper Range (bp)
10	D10S185	116.34	89.32	144.12	0.77	206	222
10	D10S192	124.27	91.48	157.82	0.76	242	268
10	D10S597	128.73	93.64	164.56	0.64	278	298
10	D10S1693	137.39	97.96	177.48	0.81	217	231
10	D10S587	147.57	104.09	191.51	0.81	96	118
10	D10S217	157.89	115.34	201.2	0.81	100	124
10	D10S1651	168.77	129.47	208.76	0.8	210	232
10	D10S212	170.94	131.64	210.92	0.71	193	209
11	D11S4046	2.79	3.45	1.09	0.86	105	129
11	D11S1338	12.92	19.66	5.37	0.74	259	277
11	D11S902	21.47	23.93	18.2	0.79	152	172
11	D11S904	33.57	35.18	31.02	0.82	187	215
11	D11S935	45.94	45.96	44.98	0.73	200	222
11	D11S905	51.95	51.71	51.48	0.72	272	298
11	D11S4191	60.09	54.62	65.45	0.87	94	124
11	D11S987	67.48	54.9	79.51	0.82	100	138
11	D11S1314	73.64	59.25	86.99	0.76	97	123
11	D11S937	79.98	61.44	98.78	0.88	149	183
11	D11S901	85.48	65.07	105.21	0.81	314	330
11	D11S4175	91.47	70.9	111.6	0.89	290	342
11	D11S898	98.98	76.57	121.23	0.79	144	166
11	D11S908	108.59	81.57	135.14	0.76	175	191
11	D11S925	118.47	82.64	153.31	0.85	265	293
11	D11S4151	127.33	89.03	165.24	0.79	335	347
11	D11S1320	141.91	104.29	179.05	0.69	264	280
11	D11S968	147.77	114.87	180.14	0.81	144	164
12	D12S352	0	0	0	0.71	156	176
12	D12S99	12.6	19.94	5.37	0.83	268	300
12	D12S336	19.68	26.63	12.85	0.82	117	135
12	D12S364	30.6	31.08	30.08	0.87	300	320
12	D12S310	36.06	38.92	33.3	0.7	248	256
12	D12S1617	44.03	44.26	43.83	0.81	250	270
12	D12S345	53.09	45.33	61.08	0.87	215	251
12	D12S85	61.34	48.52	74.17	0.7	104	136
12	D12S368	66.03	50.65	81.86	0.81	206	226
12	D12S83	75.17	54.93	96.2	0.81	107	127
12	D12S326	86.4	64.54	108.86	0.8	210	236
12	D12S351	95.56	72	119.7	0.74	151	173
12	D12S346	104.65	74.13	135.8	0.84	191	217
12	D12S78	111.87	77.33	146.85	0.91	177	215
12	D12S79	125.31	89.79	161.73	0.88	163	189
12	D12S86	134.54	92.87	176.82	0.89	132	172
12	D12S324	147.17	102	192.99	0.69	238	260
12	D12S1659	155.94	113.13	199.59	0.78	294	320
12	D12S1723	164.63	120.66	209.32	0.69	201	219
13	D13S175	6.03	3.66	4.24	0.75	105	123
13	D13S217	17.21	16.39	16.02	0.67	246	266
13	D13S171	25.08	21.94	26.84	0.71	179	207
13	D13S218	32.9	33.01	31.14	0.65	145	157
13	D13S263	38.32	36.4	38.73	0.85	150	178
13	D13S153	45.55	44.27	45.18	0.82	94	126
13	D13S156	55.85	48.7	61.29	0.8	280	300
13	D13S170	63.9	51.92	74.23	0.9	146	176
13	D13S265	68.73	55.11	80.73	0.68	93	131

Chromosome	Marker	Avg cM	Male cM	Female cM	Heterozygosity	Lower Range (bp)	Upper Range (bp)
13	D13S159	79.49	62.59	94.81	0.88	157	199
13	D13S158	84.87	66.87	101.29	0.82	121	139
13	D13S173	93.52	70.11	115.4	0.82	237	257
13	D13S1265	98.82	74.95	120.83	0.81	280	310
13	D13S285	110.55	89.68	129.72	0.82	93	119
14	D14S261	6.46	8.66	0	0.75	276	308
14	D14S283	13.89	11.91	11.29	0.82	132	162
14	D14S275	28.01	30.22	20.91	0.71	150	164
14	D14S70	40.11	43.06	32.63	0.76	103	119
14	D14S288	47.51	51.02	39.32	0.84	196	220
14	D14S276	56.36	55.91	52.09	0.75	241	253
14	D14S63	69.18	59.11	74.61	0.77	180	198
14	D14S258	76.28	62.48	85.33	0.8	198	218
14	D14S74	87.36	68.72	101.35	0.79	301	325
14	D14S68	95.89	75.12	112.03	0.91	321	351
14	D14S280	105	80.46	124.95	0.68	243	263
14	D14S65	117.3	85.96	142.24	0.8	129	161
14	D14S985	126.61	100.71	147.64	0.76	244	258
14	D14S292	134.3	113.26	152.03	0.74	88	104
15	D15S128	6.11	12.36	0	0.78	201	219
15	D15S1002	14.58	21.75	7.7	0.79	110	138
15	D15S165	20.24	26.47	13.11	0.77	185	217
15	D15S1007	25.86	30.79	21.08	0.87	89	113
15	D15S1012	35.95	42.67	29.32	0.73	98	116
15	D15S994	40.25	45.89	34.72	0.72	306	318
15	D15S978	45.62	51.25	40.11	0.84	187	215
15	D15S117	51.21	52.45	50.06	0.78	324	342
15	D15S153	62.4	57.25	67.73	0.86	244	278
15	D15S131	71.28	59.64	83.11	0.85	244	284
15	D15S205	78.92	66.17	91.9	0.88	130	170
15	D15S127	86.81	70.57	103.41	0.85	121	157
15	D15S130	100.59	81.87	120.28	0.69	288	302
15	D15S120	112.58	93.35	132.28	0.75	158	186
16	D16S423	10.36	18	3.49	0.73	140	166
16	D16S404	18.07	26.58	10.8	0.8	265	285
16	D16S3075	23.28	29.79	17.21	0.78	81	99
16	D16S3103	32.07	43.84	21.48	0.82	316	344
16	D16S3046	40.65	48.12	34.39	0.74	87	113
16	D16S3068	48.53	50.26	47.41	0.77	223	239
16	D16S3136	62.11	51.33	74.25	0.7	176	188
16	D16S415	67.62	54.53	81.78	0.74	216	244
16	D16S503	83.55	56.66	111.65	0.8	300	320
16	D16S515	92.1	63.11	122.6	0.81	327	359
16	D16S516	100.39	67.43	134.7	0.73	248	270
16	D16S3091	111.12	77.15	146.64	0.72	170	186
16	D16S520	125.82	89.05	164.19	0.84	152	168
17	D17S849	0.63	1.25	0	0.69	257	271
17	D17S831	6.6	13.26	0	0.81	112	134
17	D17S938	14.69	25.15	4.32	0.76	242	262
17	D17S1852	22.24	31.61	12.95	0.87	283	311
17	D17S799	31.96	43.43	20.51	0.7	189	211
17	D17S921	36.14	47.71	24.82	0.72	196	214
17	D17S1857	43.01	47.71	38.49	0.62	167	177
17	D17S798	53.41	48.78	58.32	0.8	300	324

Chromosome	Marker	Avg cM	Male cM	Female cM	Heterozygosity	Lower Range (bp)	Upper Range (bp)
17	D17S1868	64.16	51.99	76.62	0.74	258	272
17	D17S787	74.99	55.21	95.25	0.81	142	178
17	D17S944	82.56	58.44	107.18	0.77	319	335
17	D17S949	93.27	61.65	125.61	0.8	214	232
17	D17S785	103.53	72.39	135.3	0.83	169	197
17	D17S784	116.86	86.39	147.37	0.77	233	247
17	D17S928	126.46	105.07	148.54	0.77	74	108
18	D18S59	0	0	0	0.82	154	176
18	D18S63	8.3	13.82	3.27	0.79	80	106
18	D18S452	18.7	25.78	12.08	0.84	131	149
18	D18S464	31.17	37.79	25.54	0.63	303	319
18	D18S53	41.24	44.24	38.77	0.79	156	186
18	D18S478	52.86	45.36	61.04	0.63	247	261
18	D18S1102	62.84	47.5	78.91	0.79	96	108
18	D18S474	71.32	48.56	95.34	0.82	126	148
18	D18S64	84.8	58.21	112.76	0.74	319	345
18	D18S68	96.48	65.35	129.46	0.79	273	299
18	D18S61	105.03	73.35	138.44	0.87	213	243
18	D18S1161	114.26	77.69	153.13	0.83	215	241
18	D18S462	120.05	85.99	156.4	0.7	300	322
18	D18S70	126	97.49	156.4	0.83	115	135
19	D19S209	10.97	16.14	6.26	0.77	243	259
19	D19S216	20.01	24.46	16.32	0.76	258	276
19	D19S884	26.37	30.89	22.08	0.86	97	117
19	D19S221	36.22	38.4	34.35	0.85	91	115
19	D19S226	42.28	41.63	43.34	0.84	241	273
19	D19S414	54.01	42.7	65.82	0.77	168	198
19	D19S220	62.03	44.83	79.74	0.85	271	295
19	D19S420	66.3	46.96	86.19	0.8	101	121
19	D19S902	72.72	53.39	92.6	0.78	241	277
19	D19S571	84.08	65.45	103.4	0.83	290	322
19	D19S418	92.56	74.74	111.81	0.67	90	110
19	D19S210	100.01	89.71	111.81	0.74	175	195
20	D20S117	2.83	5.48	0	0.84	154	190
20	D20S889	11.2	19.48	3.21	0.85	93	129
20	D20S115	21.15	30.63	11.78	0.65	238	250
20	D20S186	32.3	38.82	25.84	0.85	117	143
20	D20S112	39.25	43.1	35.46	0.8	217	241
20	D20S195	50.81	45.47	56.28	0.81	133	159
20	D20S107	55.74	46.66	64.97	0.81	200	224
20	D20S119	61.77	49.02	74.75	0.83	109	129
20	D20S178	66.16	51.41	81.27	0.84	182	198
20	D20S196	75.01	53.77	96.82	0.82	263	299
20	D20S100	84.78	58.04	112.03	0.73	213	239
20	D20S171	95.7	71.56	120.91	0.81	130	158
20	D20S173	98.09	76.01	120.91	0.67	131	185
21	D21S1256	9.72	2.21	17.19	0.66	101	121
21	D21S1914	19.39	7.56	31.23	0.86	262	284
21	D21S263	27.4	11.03	44.05	0.74	198	232
21	D21S1252	35.45	18.72	52.23	0.8	148	180
21	D21S266	45.87	30.46	61.74	0.6	159	181
22	D22S420	4.06	2.6	3.32	0.76	156	172
22	D22S539	14.44	12.49	15.35	0.55	203	221
22	D22S315	21.47	14.65	27.42	0.81	184	214

Chromosome	Marker	Avg cM	Male cM	Female cM	Heterozygosity	Lower Range (bp)	Upper Range (bp)
22	D22S280	31.3	25.37	36.23	0.82	216	228
22	D22S283	38.62	30.71	45.54	0.9	132	160
22	D22S423	46.42	30.71	61.58	0.82	290	312
22	D22S274	51.54	35.04	67.47	0.77	280	302
X	DXS1060	15.12	22.77	7.66	0.9	249	271
X	DXS8051	17.29	22.77	12.03	0.93	110	140
X	DXS987	22.18	22.77	22.04	0.9	210	232
X	DXS1226	27.59	22.77	32.98	0.91	284	306
X	DXS1214	33.54	22.77	44.98	0.88	287	301
X	DXS1068	37.33	22.77	52.63	0.82	248	268
X	DXS993	42.21	22.77	62.5	0.88	271	297
X	DXS991	52.5	22.77	83.3	0.92	316	344
X	DXS986	57.37	22.77	93.17	0.87	156	184
X	DXS990	60.62	22.77	99.73	0.86	128	138
X	DXS1106	66.58	22.77	111.8	0.81	128	142
X	DXS8055	70.91	22.77	120.53	0.81	314	326
X	DXS1001	75.79	22.77	130.44	0.9	194	214
X	DXS1047	82.07	22.77	143.24	0.9	160	174
X	DXS1227	88.33	22.77	155.86	0.81	84	104
X	DXS8043	94.22	22.77	167.87	0.9	150	184
X	DXS8091	96.14	22.77	172.44	0.87	84	106
X	DXS1073	102.35	22.77	184.34	0.89	310	336