Primer name	5’ to 3’ sequence of primer	Product size in mouse (base pairs)
06.01EF	ctgcyaggtcagggtctacagatg	147
06.01ER	ttcagcaagtattraaagaaggcc	
06.02EF	ggagtcrgtgtcatagggacttgg	120
06.02ER	gatggwacaagtaaycgggacagc	
07.01BF	ttgaggtatcttgatcttctttg	143
07.01BR	catagacttgtcttgcaaacacc	
08.01BF	gtctgttaagtcaaacactaatg	144
08.01BR	atattagacttagctgtgctcag	
08.02BF	tgttatatgtgacccaatggcac	116
08.02BR	aaaattggtgattattgtatgtcatt	
09.01BF	attgrgttgttatcttcttctgcc	113
09.01BR	gaaattgaaaywccytccatatac	
09.02BF	cacctccacartktggaatttggt	118
09.02BR	tgcattaayccayysccyactccc	
10.01BF	ggatgaagtacaatgatattgctgtg	139
10.01BR	ttaccttgtattaggaactgtgcc	
11.02BF	catattgtccttggacttggctg	142
11.02BR	ttacgaatgcaggtcaagacagg	
12.01BF	gcrtgraaatatttgctgtctgaatag	286
12.01BR	ggattatatgccagttaatgggrccct	
15.01NTF	crccagwrgtttgagyatcactac	115
15.01NTR	gtccagyggtccctggtcttc	
15.02NTF	sgatggtttttctggataccagtg	122
15.02NTR	tcacaaggctagttcgaaaacatg	
16.01BF	gcacaatccagtttatcttcttactc	128
16.01BR	gccataaagactgctttgaaaaatacc	
16.02BF	agtgattacaaaattggcattttagc	264
16.02BR	gtatgaaatttgattacctataacag	
17.01NTF	ctaatgtagaaarctwtgkatcca	158
17.01NTR	agggkgattcwggaggrccat	
18.01BF	gtactggcttttagtttgacc	211
18.01BR	gccattatagactttaattgc	
19.01BF	cttgtccatggcaaatgctgg	167
19.01BR	ggtcttgccattcctggaccc	
20.01BF	ttatttacctcaggtgctgac	101
20.01BR	cagatgctttttaaaatgcca	
21.01BF	cctgttgtttgtcaaaaggtactac	299
21.01BR	tgagtgagagcttttctcagcatg	
22.01BF	caactactgaaatgayttytaggg	94
22.01BR	tgtgwaaaaawttyawccttaacc	
25.01BF	ttaacrtgaagtagacmatwatttcctctc	137
25.01BR	gatttattttgtaggmtatgataaaatcag	
26.01BF	taatataagtccctgctgggc	152
26.01BR	tcagaaagttgtaaatgattg	
26.02BF	catggaggtgtacctattcatcac	95
26.02BR	tcactttgaactccatgggagcg	
27.01BF	tgctgtatatatatgtctaaactg	133
27.01BR	actattaatatacaaatggtgaag	
27.02BF	tcttgtaaaattagtttcaatgtc	154
27.02BR	tcattgaataaaaggttacttagg	

28.01BF	aattacaaattcagmcttarstgc	125
28.01BR	akttcartgaaaggtatatttagc	
30.01BF	gaaactttatggtgttttcag	123
30.01BR	acaggcaatctaaacatgttc	
33.01BF	ttggcaagcttgtagaagcactat	191
33.01BR	aaactcgtgcttctggggatgaaa	
34.01BF	agtaggatatctttagacctcagg	166
34.01BR	ttacttwrgactmaacmtgaccac	
36.01BF	tatttctaattgctrttttatgcc	117
36.01BR	agataaatgayaaatttawcysca	
37.01BF	ccttaragcatawctkaaaayaaaaat	134
37.01BR	agatttagtktytwcacasttgcc	
38.01BF	tataagtcttcagrayctaacttc	176
38.01BR	takagttcaattcactatmacccc	
38.02BF	ttgamtaacaacatggwccaagac	99
38.02BR	cactsttccctttttcttctgaagg	
38.03NTF	taaagacasgccctgraatctkcg	137
38.03NTR	tmggtgacttcattgatgtragtg	
39.01BF	caagctcccytcsgagtcagcgtc	275
39.01BR	gctcccgcgastagmagkgtragg	
39.02NTF	ttttckgtrttggctggcacagag	163
39.02NTR	tyagtgarccmagratcagytacgg	
40.01NTF	ggcartactgcargatgccytcct	142
40.01NTR	ggsctgctggcwgaaccccag	
41.01BF	tkgttcttcatgcacatgcagatgc	97
41.01BR	gggcackgcrattgckggcatyg	
42.01BF	tcttrgttttgtccacacatttgc	182
42.01BR	cytgacattygggcctgagtactc	
43.01NTF	gcygctgcwgcagyckgaggctgc	98
43.01NTR	ctgctgctgwgcgcgtycygcctg	
45.01BF	awactaawamtcccyctagtaaytc	191
45.01BR	tgggattctaatctgctgaactyg	
47.01BF	attgctgagkgtaayrgaaactgg	148
47.01BR	actacygtctggtcctggaasaaa	
48.01BF	tyacaaagacartctgccaagkyracc	97
48.01BR	aggcatgtyctagytcagataaacatg	
49.01NTF	tgacaggccaatcctcagaagttc	119
49.01NTR	tgatwgtratggcytctcatatgcaag	
49.02NTF	gcctaygartcytctgtgcatagc	124
49.02NTR	csgascggtgrgckcggaaccg	
50.01BF	attawattgcctycaaggatttag	155
50.01BR	ccacaagrctgctagatcaattaa	
51.01NTF	ttctctggatgtcataggttaatg	133
51.01NTR	ggagggatttttgaaacwgtggaa	
51.02NTF	gctggtgtccctggtccagagccc	138
51.02NTR	ggcggggacccrgcccaagttggg	
52.01NTF	aggatggcyrtcatgaaagccaag	162
52.01NTR	ctgggaaggmytgtggatgaattg	
53.01NTF	gccatagccatagccacagcccagt	106
53.01NTR	ctgtggctatggaggcctgggcta	
m54.02NTF	gtagagatgcctcccactggttggcag	245
m54.02NTR	tccaaactggctcctggctcctggacc	

55.01NTF	atttacaacgttccattcatagac	131
55.01NTR	gagagggtgccattgtctcttg	
55.02NTF	gttttwgctcttctgccttgcatg	125
55.02NTR	gaagagactcctccgtacagtaa	
56.01BF	ttaattacacattatgasaccaattat	97
56.01BR	aatggyrgaagaaaagaattaaaayag	
56.02NTF	tggagacytgggcaatgtgactgc	88
56.02NTR	atgstctcctgagagtgagatcac	
57.01NTF	tcctgccygcctgggtgagcggcg	145
57.01NTR	gtcagcacgtgcagcccctcgcgc	
57.02NTF	trcgctccttygagtctgtggatc	205
57.02NTR	ttwtcttcgtgrgcaaaagagacc	
58.01EF	aaacycaygtagataagaccttac	112
58.01ER	tacagaaattaacagccatattgg	
58.02EF	cctttyaggagcttgctgaagtca	113
58.02ER	gcagaaacmattcttytgaaakcwgt	
m60.01NTF	cagctgcgcctgaagatcaacagccgcg	164
m60.01NTR	gcgccagcagcagcgtggcgatcttgg	
60.02BF	tacctgagggatrttaattcctttyct	105
60.02BR	attgaggggagtgaygatgaygckttag	
61.01NTF	gaggacwacagctccayggakgrgyct	80
61.01NTR	agaacyctcaraaacacagagtttaag	
62.02NTF	catcttagaggycttggacaaggacrgytc	105
62.02NTR	gtttggagmacatcwtctygctccttttc	
62.03NTF	cagagacacctactgaggtgyaccctg	139
62.03NTR	gtcatggatgaatctgcaatctccgatgg	
63.01NTF	gccaaaaaagacaaccacttaaattttaa	159
63.01NTR	cttgtrgayttccttaygggccctgaaatg	
64.01NTF	tacatccggtcaggggtatataccatg	137
64.01NTR	cygaatacagatccacygagagcttggt	
65.01NTF	ggtcgtksgagtgctccagcttcttgg	109
65.01NTR	agctrgaggcsctctacrtcctcatgg	
m66.01NTF	atgctgcggtcgccgctcctcagc	121
m66.01NTR	cgcttcacgccgccttccaccg	
68.01BF	taagtaatctcaccscmaagcag	98
68.01BR	cyggagsatctsrgagcattaaa	
69.01NTF	ggggctcatgaacaagtttgtgg	200
69.01NTR	ccacccagggcagcaggcattc	
69.02BF	ctygrgtttrkggccaaagacgcc	159
69.02BR	ggaggaaayccttggcaccaagc	
70.02BF	accgymtggtgttygckgtggcytc	118
70.02BR	cakgaaatgtcactsagggtrtgg	
71.01NTF	gacacggccaccatgcacag	161
71.01NTR	ctcatggtcatctcctgcct	
71.02BF	gcgatgaaggagaagtccaa	129
71.02BR	gatggacgctttgtccagct	
71.02NTF	gcgatgaaggagaagtccaa	129
71.02NTR	gatggacgctttgtccagct	
71.03NTF	actctcacgtcttcagcagc	109
71.03NTR	ctggctggcagtgtgctcagg	
71.04NTF	gtcrttsgtggtccargasacggccaccaty	195
71.04NTR	ggcygcccgsgcsctcatggtcatctcctgyct	

72.02NTF	aaatcttggcaatggaag	90
72.02NTR	agcaattgtcaactgatcc	
72.03NTF	ccrgcrgggagcctcrtattcygcacacac	150
72.03NTR	ggtctaatttctckttatttatgcccctagtg	
72.04NTF	gcaatggaagawgctytraattggata	119
72.04NTR	tacttayattcagtaaagaaaatactt	
74.01BF	gcacagtttyttcaagaaaacagc	124
74.01BR	acctgagctkgasgakgtrctg	
74.02NTF	ccrtcyttcctcacgtacctctgg	118
74.02NTR	aaagcccagtggccattcaccagc	
75.01NTF	ttaggagmaaagtgrtrgaccwygca	77
75.01NTR	ggctggaayygagtagcattcrttg	
76.01BF	ctgyagtctgmtttccatctggtc	127
76.01BR	tkgytggtaaatctgtrgatgatc	
76.02BF	tcttgtaacgagtgttcagccctg	124
76.02BR	aggattctgtctctttaatrtttataa	
77.01NTF	tgccagtggcttctctgggccacc	172
77.01NTR	ctttgatcatytgctcyagatgttccc	
79.01NTF	atgttawgstgacmcccgagacag	105
79.01NTR	aagaggtkaaatcatttgctggttg	
79.02NTF	gatgaagacaacagrargtggatg	107
79.02NTR	ccacagtactgctcytcattgaag	
80.01NTF	caayctgacccygaagaccatgatngg	145
80.01NTR	ggtygttytgtttttcttyagmagcagytc	
81.01BF	tygacatggatgcaccagagacag	153
81.01BR	cttgayrgatgrtggttgaayttggtg	
82.01BF	ttaatcaarttcrtgtttccaagc	238
82.01BR	ttggttaatattcatrcttgtcwt	
83.01BF	ctgccttryttgggtcwaagacc	166
83.01BR	atttacatttgagwgcaaattacttyaatcat	
84.01NTF	ctccrrgtggccgsggccacgaac	198
84.01NTR	cgatcagcatctcyaggtagtagccg	
84.02NTF	gccaacttcttggcyatggtrgacaa	139
84.02NTR	cccgatcagcatctcyaggtagtagc	
85.01BF	agctcatyagcctggakrtcasctccc	94
85.01BR	ggctggttgycyacagccaccctg	
85.02NTF	cccgtagttctcrytccartcrtc	99
85.02NTR	gttcgyctctacggacmaarcttcat	
88.01BF	cttacaccaatttgtgytccracg	110
88.01BR	tcygcgcmgggcttagaraaattg	
90.01BF	taccttggagatccctgawatkatratrgtg	144
90.01BR	ttccttctggyagaaytgttggtgytgaatgg	
90.02EF	cgtgacrgttactcaccgstcttc	112
90.02ER	agatggatrraatcacagcggcag	
91.01NTF	tgcmgmratgacggagcccaagtc	152
91.01NTR	gmggmarggaggaraagcgctggg	
91.02BF	cttagtgtgaagaccagaaggtgg	132
91.02BR	ygaagaagccgaggtagctgatgg	
92.01NTF	ccggctcctcmagctaccggc	64
92.01NTR	accttctgratgcgtccatcgatg	
92.02NTF	gctgaagatgattytsataaaatg	97
92.02NTR	atattcytcyartaaacagtccac	

93.01NTF	cagarcaagatccmaactgctctg	104
93.01NTR	cctataaatggcctgcttgtcsrc	
93.02NTF	accatycagcayccytggttcaag	136
93.02NTR	ggtagtaggggctgatggtgg	
96.01NTF	cttgagacatgaagaaggggatgc	125
96.01NTR	gagcctsggygtggtgctgta	
96.02NTF	cattacaacaagcgctcgaccatc	119
96.02NTR	tacttggtgacrgccttggtg	
97.01NTF	tgcmgctcccgcckgagatcc	113
97.01NTR	cgctgmgwcctggcswcgatg	
98.01NTF	agcaaagacatgtccacctgggtg	115
98.01NTR	ggctgttggaytcraagaagcagg	
98.02BF	taggtgctggagatcagaatttat	85
98.02BR	taccttctccattccattggttct	
99.01EF	catgccmcgggagcagtggtg	111
99.01ER	cgkgtsacgtgctccagctcc	
99.02BF	cacagscctgccrgtgccctg	167
99.02BR	cygrkgcaggtgytggaaggc	
99.03EF	ggcttgcagcagacaggcttg	120
99.03ER	gtctagctgccagccagcttg	
100.01NTF	cctgcctctcrcagtaggccttca	132
100.01NTR	aggagggtgtgaagacagagaatg	
100.02NTF	atgcggccrgactcggtgatctcg	155
100.02NTR	ttcaaygtgacyttccggcgggcc	
101.01BF	ataacctttggkacaagrgttggc	168
101.01BR	aggacatggaaaatgtctcrcagt	
102.01EF	gccaaagcctccgattatgatggg	115
102.01ER	rggccarccmggnaaccttctagg	
102.02BF	gttsagygcmaccaggtggagct	202
102.02BR	accttsaggttgacgatgggcac	
103.01NTF	tatcawcarctccatgascaacag	121
103.01NTR	ctccttgatcttgsagccscc	
104.01BF	cagayactttkgaggtcagtttgg	145
104.01BR	gccytaggtgtctgctggraa	
104.02NTF	camgcrttcaggtaagaagctgac	136
104.02NTR	gttccaycctgmygttagraactc	
105.01BF	tttaggyaaactytggagtcggag	104
105.01BR	acttactctgtctccaggkttaag	
105.02NTF	gccagtgasatggcmcagcacac	96
105.02NTR	caccacrtcctccaccttctgctg	

Supplemental Table 1. Cross-species markers used to isolate mouse and dog BACs orthologous to human chromosome 21. Markers are named using the following conventions: the number corresponds to the segment [chromosome 21 sequence was retrieved from GenBank in 106 segments (Hattori et al. 2000), letters indicate the source of the sequence, where NT = Genbank nucleotide database (http://www.ncbi.nlm.nih.gov/Genbank/index.html), B = Sequenced Mouse BAC Ends database (http://www.tigr.org/tdb/bac_ends/mouse/bac_end_intro.html), and E = database of Expressed Sequence Tags (http://www.ncbi.nlm.nih.gov/dbEST/index.html), and the final letter indicates primer direction, where F = forward primer and R = reverse primer. Primer name starting with "m" denotes a mouse specific sequence.

Supplemental Table 2. PCR content maps of human chromosome 21 cross-species markers and murine specific markers to mouse BACs and PACs. The maps are organized based on the 340-kb segments of chromosome 21 sequence retrieved from GenBank (Hattori et al. 2000). Marker and clone names are separated into columns and rows, respectively. BACs with a sequenced end in the Mouse BAC Ends database (http://www.tigr.org/tdb/bac_ends/mouse/bac_end_intro.html) (gray background) and PACs (red lettering) are indicated. Mouse BACs and PACs were scored for the presence or absence of specific markers by PCR analysis, where " +" = present and " – " = absent.

Table 2A	Map of Segments 6 – 12
Table 2B	Map of Segments 15 – 23
Table 2C	Map of Segments 25 – 30
Table 2D	Map of Segments 34 – 39
Table 2E	Map of Segments 39 – 49
Table 2F	Map of Segments 48 – 52
Table 2G	Map of Segments 54 – 58
Table 2H	Map of Segments 60 – 66
Table 2I	Map of Segments 68 – 77
Table 2J	Map of Segments 79 – 85
Table 2K	Map of Segments 85 – 96
Table 2L	Map of Segments 97 – 105

Supplemental Table 2A. PCR Content Map of Mouse BACs for Segments 6 – 12.

	06.01E	06.02E	07.01B	08.01B	08.02B	09.01B	09.02B	10.01B	11.01B	D16Mit217	11.02B	D16Mit78	12.01B
103N11	-	-											
460J21	-	-											
398F12	-	-											
296B4	+	-											
131D14	+	+											
311F12	+	+	-										
98E5	+	+	-										
197A15	+	+	-										
270P14	+	+	-										
265J14	-	+	-										
163H2	-	-	-										
431O1		-	-										
71H12	-	-	+	+									
206G14			+	+	+								
411J10		-	-										
309O11		-	+	+	+								
192J19		-	+	+	+	-							
445D14		-		+	+	-							
367H23		-	+	+	+	-							

39D13		-	-	+	+	-							
181N7		-	-	+	+	-							
323D13		-	-	+	+	-	-	-			-		
271B21		-	-	-		+	-	-	-		-		
111L9		-	-	-	-	-	+	+			-		
65I21													
282P1						-	+	+	-	-	-		
269A21													
60K10							-	+	-	-	-		
192L5							-	+	-	-	-		
266P21								+	+	+	-	-	
84B4								-	+	-	-	-	
428H16								-	+		-	-	
33I12							-	-	+	+	-		
196N4							-		+	+	+		
395E5													
128O8								-	-		+	+	
147M16								-	+		+	+	
210I4								-	-	+	+	+	-
323P20								-	+		-	-	+
119J9								-	-		+	+	
135E17											-	+	+
135E18													

Supplemental Table 2B. PCR Content Map of Mouse BACs for Segments 15 – 23.

	15.01NT	180274	15.02NT	Z72000	16.01B	16.02B	6017	17.01NT	18.01B	19.01B	20.01B	21.01B	22.01B	D16Mit158	D16Mit203	D16Mit178	D16Mit177
79J22	-	-	-	-	-		-										
256N6	+	-	-														
88K2	+	+	+	+	-		-										
73L12	+	+	+	+	+		-										
149D21	-	+	+	+	-		-										
95G10			-	-	+	+	-	-	-								
38K8																	
278F7		-	-	-	-	+	-	-									
151H7		-	-	-	-	+	+	+	-		-						
126A11						-	+	+	-	-	-						
273C4		-	-	-	-	-	+	+	-		-						
278B16						-	+	+	-	-	-						
292I3		-	-	-	-	-	+	+	-		-						
353C21						-		+	-	-	-						
360F16						-	+	+	-	-	-						
450E18							+	+	-	-							
475D22						-	-	-	-	-							
273B13							-	-	-	-							
95N17							-	-	-	-							
430M13						-	-	-	-	-							

463H18							-		+	-	-						
78F14							-		+	-	-						
143E3							-		+	-							
296F21							-		-	+	-						
36E15							-		-	-	+						
84F11							-			-	+						
351I1									-	-	+						
431K5											+	-	-				
340H5																	
276L10											-	-	-				
78N19											-	-	+		-	-	
116O16												-	+	-	-	+	
377J18												-	+		-	+	+
112H7												-	+	+	+	+	
15P5												-	+	+	+	+	-
168I4												-	+		+	+	+
326K16												-	-	-	-		+
279P14												-	-	-	-	-	+
359J7												-	-	-	-	-	+

Supplemental Table 2C. PCR Content Map of Mouse BACs for Segments 25 - 30.

	25.01B	26.03NT	26.01B	26.02B	244073	27.01B	27.02B	28.01B	30.01B
110L12	+	-	-	-	-				
314N7	+	-	-	-	-				
311P5			+	+	-	-			
444K12	-	+	+	-	-	-			
348J5	-	+	+	+		-			
265C10	-	-	-	-	-	-			
464N2	-	-	-	-	-	+	+		
283M19	-	-	-	-	+	+	+		
458H22	-	-	-	-	-	-	-	+	-
48N4			-			-	-	+	-
336G19			-			-	-	+	-
428N16						-	-	-	-
241J6							-	-	+
241I7							-	-	+
152B10							-	-	+
202P4								-	+
135K6									+

Supplemental Table 2D. PCR Content Map of Mouse BACs for Segment 34- 39.

	34.01B	36.01B	37.01B	38.01B	38.02B	38.03NT	39.01B
452O20	-				-		
366O6	-	-	-	-	-		
421B24	-	+	-	-	-		
162P20	-	+	-	-	-		
383H23	-	-	-	-	-		
283M19							
95O10		+	-	-			
109P11	-	+	-	-			
275L2	-	+	-	-			
20D13		-	-	-	-		
134F19		-	+	-			
335D18		-	+	-			
374B2		-	-	+	-	-	-
390J11		-	-	+	-	-	-
23L16		-	-	-	+	-	-
19A14		-	-	-	-	+	+
253E17		-	-		-	+	+
480A3					-	+	+
160B10					-	+	+
156B11					-	+	+
475A17					-	+	+

Supplemental Table 2E. PCR Content Map of Mouse BACs for Segments 39 - 48.

	39.01B	39.02NT	D16Mit190	40.01NT	41.01B	D16Mit179	M-08234	286563	D16Mit152	441428	42.01B	43.01NT	MHAa29a8.seq	D16Mit70	D16Mit94	D16Mit224	45.01B	D16lum71	47.01B	MTH2511	48.01B	49.01NT
45E7	+	+	+																			
215G8	+	+	+																			
145I13	-	-	-		-																	
99P18	-	+	+																			
210E4	+	+	+																			
126H12	-	+	+	-	-																	
33L1	+	+	+																			
144N5	+		+																			
306D11	-			-	-																	
146I13	-	-		+	-																	
224N8				+	-	-																
40K24				-	+																	
320L18				-	+																	
332N5				-	+	+	+															
42K4				-	-	-	+	+	+	-	-											
123E5				-	-	-	+	+	+	+	-	-	-									
294J7					-	-	-	+	+	+	+	-	-									
368H12												+	+									

97H9												+	+									
75F1													+	+								
47C24													+	+								
327E10														+								
298B13														+	+	+						
328N7														-	+	+	+					
117N4																	+	-	-	-		
124L12																	+	-		-	-	-
160L2																	+	-	-	-	-	-
296H18																	-	-	+	-		
61B4																	-	-	-	-		
254A2																	-	-	+	-		
477H6																	-	-	+	-		
23D14																		-	+	-	-	-
52C24																	-	-	+	-	-	-
338G17																	-	-	+	-	-	-
312C10																	-	-	+	+	+	-
203N5																	-	-	-	+	+	+
264F8																			-		+	+
9M14																			-	-	-	
131C23																			-	-	-	-
82L10																			-	-	+	+

Supplemental Table 2F. PCR Content Map of Mouse BACs for Segments 48-52.

	48.01B	49.01NT	49.02NT	413966	MhA52d8.seq	50.01B	51.01NT	46.MMHAP54FRH10.seq	MHAa21c11.seq	51.02NT	52.01NT	447396
264F8	+	+	-			-	-					
82L10	+	+	-			-	-					
30A17	+	+	-			-	-					
298I19	+	+	-			-	-					
279J20	-	+	-	-	-		-			-		
82C22			+	+	-					-		
350J6	-	-	-	+	+	-	-	-	-	-		
167B15	-	-	-	-	+	+	-	-	-	-		
103G19	-	-	-			-	-					
395E14	-	-	-			+	+					
406C10	-	-	-			+	-					
288E9			-	-		-	+					
271M11	-	-	-	-	-		-			-		
37B10	-	-	-	-		-	+	+	+	+		
327F17	-	-	-	-	-		-			+		
297F21	-	-	-	-	-		-			+		
94N14										-	+	-
172B12										-	+	-

216K16										-	+	-
139F24	-	-	-	-			-			-	+	+
340M11	-	-	-	-	-		-			-	+	+
29E9										-	+	+
45C6										-	+	+
105A7										-	-	+
403A5										-	-	+
3L22												-
71I15											-	+

Supplemental Table 2G. PCR Content Map of Mouse BACs for Segments 54 – 58.

	446913	523032	54.02NT	02.MMHAP91 FRA8.seq	55.01NT	668727	55.02NT	56.01B	56.02NT	D16Mitlum51	57.01NT	57.02NT	58.01E	58.02E
403A5	-	-	-		-									
71I15	+	-	-	-	-	-	-							
68H4					-		-							
322H7		-	-		-	-								
1I7		+		-										
64G9		+	+	-										
83B9		+	+	-	-	-								
357M14	-	+	+	-	-	-	-							
3L22	-	-	-		-	-	-							
259N4	-	-	-	+	-	-	-							
380B17			-	+	-	-			-		-	-		
111D11	-	-	-	-	+	-	-							
384A17			-		+									
76G16			-		-					-	-			
352B13			-		+	+	+		-	-	-	-		
375O23					-				-	-	-			
316D7			-		-	-	+	+	-	-	-	-		
30F22			-		-	-	-	+	+	+	-	-	-	
159D12					-				+	+	-			

104B11					-				+	+	-			
353D14					-				+	+	-			
40N3			-		-	-	-	-	+	+	-	-	-	
366P17					-	-	-	-	+	+	-	-	-	-
19D19					-	-	-	-	+	+	-	-	-	-
118L24			-			-	-		-	+	-	-		
159D12														
181E15										-	+	+		
257O16			-		-	-	-		-	-	-	+		
354O24								-					-	-
22D13										-	-	-	+	+

Supplemental Table 2H. PCR Content Map of Mouse BACs for Segments 58 – 66.

	60.02B	456827	m60.01NT	D16Mit26	244213	62.03NT	2315	510886	666706	63.01NT	D16Mit155	660379	689425	64.01NT	65.01NT	X60457	427973	691377	D16Mit52	D26532	m66.01NT	D16Mit86
5C1	-	-																				
354O24	-	-																				
275I18	-																					
284E11	+	+																				
108O15	+	+	-																			
272O8	+	+	+																			
69A15	-	-	-																			
327B2			+	+	+	-	-															
190G10			+	+	+	-	-															
348A6				+	+	-	-															
257K24				-	+	-	-															
297C23				-	-	+	+	+	+	-	-	-	-	-	-							
250C1				-	-	-	-	-	+	+	-	-	-	-	-							
280L21					-	-	-	-	-	+	+	+	-	-	-							
129G3				-	-	-	-	-	-	+	+	+	-	-	-							
97I16								-	-	-	-	-	+	+	-							
48L8								-	-	-	-		+	+	-							
366A2								-	-	-	-	-	+	+								
349O17								-	-		-	-	+	+	-							
105P18								-	-	-	-	-	-	-	+	+	-	-	-	-		

204P24														-	+	+	+	-	-	-		
276I20														-	+	+	+		-	-		
80K2														-	+	+	+	+	-	-		
130C14														-	-	-	-	-	+	+	-	
300J13														-		-	-	-	+	+	-	
355B6														-	-	-		-	+	+	+	
36I12																		-	+	+	+	-
373A14																		-	-	-	-	-
385M22																		-	-	-	-	-
385O24																		-	-	+	-	-
365F5																		-	-	-	-	-
421E4																		-	-	-	-	-
104E11																		-	-	-	-	-
36903																		-	-	-		+
2E17																		-	-	-		+
59G14																		-	-	-		+

Supplemental Table 2I. PCR Content Map of Mouse BACs for Segment 68 – 77.

	68.01B	41MHAa75d5.seq	69.02B	69.01NT	433180	250723	70.02B	71.01NT	71.02NT	71.03NT	72.02NT	184608	73.01B	74.01B	74.02NT	75.01NT	76.01B	76.02B	77.01NT	362913
59G14	+	+																		
306C5		+																		
66B19			+																	
215B16			+	+																
200A24				+	-	-	-	-	-	-										
278A14				+	-	-	-	-	-	-										
127B16				-	+	-	-	-	-	-										
77O10																				
324O5				-	+	+	+	+	-	-										
156K6				-	+	+	+	+	+	-										
116K7																				
292N15																				
110F12									+	+										
266H15									-	-	-	-								
567F3										+	+									
198O8											+									
290H14									-	-	+	-								
340N5											+	+	+							
318K13				-	-	-	-	-	-	-	+	+	+	-				-		

444M16				-	-	-	-	-	-	-	-	+	+	+				-		
617H16													+								
453O3														+							
356B22															+						
455F9									-	-	-	-	-	-	+	-	-	-			
128C21											-	-	-	-	+	+	-	-			
149O17									-	-	-	-	-	-	+	+	-	-			
179B9									-	-	-	-	-	-	+	+	-	-			
204E16									-	-	-	-	-	-	-	+	-	-			
662M24																+					
312J15									-	-	-		-	-	-	-	+	-	-	-	
215C1																	+	+			
190J24																	+	+			
326G17																	+	+			
395D9																	-	+	-	-	
148F19											-	-	-	-	-	-	-	+	-	-	
47H20												-	-		-	-	-	-	-	-	
99L13																		-	+	+	
135L20																		-	+	+	

Supplemental Table 2J. PCR Content Map of Mouse BACs for Segments 79 – 85.

	362913	79.01NT	79.02NT	80.01NT	81.01B	82.01B	84.01NT	671401	85.01B	685563	85.02NT
20K24	-	-	-	-	-						
261D12	-	+	-	-	-						
479C17	-	+	-	-	-						
170F2	-	+	-	-	-	-					
405K20		+	+								
215L9	-	-	-	+	-	-					
186E16				+							
546K22				+	+						
391B16	-	-	-	-	+	-					
330K16	-	-	-	-	+	+					
205O12	-	-	-	-	+	+					
391B14											
497N4						+					
410O15											
390G6											
639K11											
212A19						+	+	+	+	-	-
204E8						-	-	-	+	+	+
39A5											
443E19											
353I17											
246J16						-	-	-	+	+	+

Supplemental Table 2K. PCR Content Map of Mouse BACs for Segments 88 – 96.

	85.02NT	88.01B	90.01B	90.02E	91.01NT	91.02NT	92.01NT	92.02NT	93.01NT	93.02NT	96.01NT	96.02NT
39G2	+	+		-	-	-						
79G1		+		-	-	-						
358H10		+		-	-	-						
99H6		+		-	-	-						
111I12			+	+	-							
306E24		-		-	+	-						
172D20				-	+	-						
157L8				-	+	+	-	-	-	-	-	
70I17				-	+	+	-	-	-	-	-	
85B11				-	-	+	-	-	-	-	-	
8M10				-	-	+	-	-	-	-	-	
164L9				-	-	+	-	-	-	-	-	
148M13				-	-		+	+	-	-	-	
372J3				-	-		+	+	-	-	-	
284B5				-	-	-	+	+	-	-	-	
311O13				-	-	-	-	+	+	-	-	
348J11				-	-		-	-	+	+	-	-
257F17										+	-	-
13D6										+	-	-
281K8										+	+	-
367A22										+	+	-

130H8										-	+	-
314L20										-	+	-
47M1										-	-	-
135C18										-	-	+
200C2										-	-	+
362N2										-	-	+

Supplemental Table 2L. PCR Content Map of Mouse BACs for Segments 96 – 105.

	97.01NT	98.02B	98.01NT	99.01E	99.02B	99.03E	100.01NT	100.02NT	101.01B	102.01E	103.01NT	104.01B	104.02NT	105.01B	105.02NT
34A10	-	-	-												
138K10	+	-													
27M7	+	-													
287L13	+	-	-												
30N2	+	+	-												
610J16		+													
67M9	-	+	+												
33H14			+	-	-	-	-	-							
118P5	-	-	+												
314P3	-	-	-	-	-										
114F6			-	+	+	-									
b340M5				-	+	+	-								
364C8				-	+	+	-								
282N5			-	-	-	-	-	-							
386A2					-	+	+	-	-						
542P11					-	-	+	+	-						
95M21							+	+	-	-		-	-	-	
46E5							-	+	-	-		-	-	-	
53B20							-	+	+			-	-	-	
385F14							-	-	+	-		-	-	-	

11C5							-	-	+			-	-	-	
132D10															
111M6							-	-	-	+		-	-	-	
446I3							-	-	-	+	-	-	-	-	
150H16										+	-	-	-	-	
153H8									-		+	-	-		
218A23									-		+	-	-		
128C8							-	-	-	-	+	-	-	-	
27P21											-	+	-	-	-
412M8											-	+	-	-	-
536F4												+	+		
142M15							-	-			-	+	+	-	
12J13											-	+	+	-	-
64P20											-	+	+	-	-
77C7											-	+	+		-
361J3											-	-	+	+	-
260C14											-	-	+	+	-
2D9											-	-	-	-	+
358M4											-	-	-	-	+
61F14											-			-	-