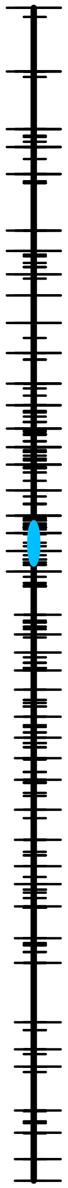
Legend for the supplemental figure:

13 cotton Consensus maps from 13 corresponding homoeologous groups. Markers colored with green, blue and red were originally from At, Dt and diploid D, respectively. Markers colored with brown were common loci originally from two or more homoeologous chromosomes. Vertical bars colored with yellow and green represented inverted regions on diploid D and At chromosomes compared to the consensus map, respectively. The vertical ellipses highlighted with blue on the map represented the possible location of centromeres, inferred as described elsewhere (Rong et al 2004).

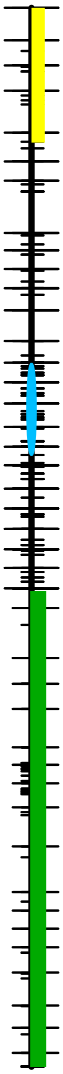
C01 (195.4 cM, 245 Loci)



0 Gate1AH08a PXP4-71 pAR4-09 (1.5) Gate1CH03a
10.6 Gate1AF04a (11.5) Gate4DE08a
20.2 R45sa (21.3) PXP1-57 (21.5) pAR0855 (22.3) CPCDNA
23.2 pAR0234a pAR0939a PVNC091 PXP2-13 (25.2) Gate1CG05
27.7 Unig06H02a (28.9) Gate1BG11a (29.2) A1619a P01-24a
37.1 CMS26
40.5 S11a A1826 (41.1) pAR0078a (41.4) P12-16 (42.5) Gafb05F01 (43.2) pAR0515 pAR10F12a
44.4 Unig23F04a (45.1) Gate1CB11
47.9 Unig26E07
52.5 pVNC190a (55) Unig27C06
57.5 pAR0057 (58.6) pAR0544 pAR0844
62.6 Unig26B04a (63.4) pAR0711a (64.6) P05-11a
66.2 BNL0836 pAR0049a (67.2) A1573 pAR10E01 (67.4) pAR04D08a (68.1) Unig22A01 (69) pAR0436 pAR0188 A1625
70.1 Gate1AA05a pAR0237a (70.3) Gate1DG04a (70.6) G1016a (71) Gate3CB09a (71.1) Coau2O24a Gate1DH08 pAR01F03 (72.2) see below
73.2 G1271 (73.7) Gafb05B01 (73.9) CMS37a (74) pAR0714 (74.6) pAR0291b (75.1) pAR07H03 (75.4) Unig25H02a
76.1 Gate1BF05a (76.5) Gate3BD02 (76.6) PXP4-52 A1559 pAR0173b (76.7) M16-106 (77.4) Coau2J14a pAR08F11 (78.8) see below
80.4 Coau2J14b pAR0173a Coau4M13 Gate3CH01a (81.4) Unig06H02b (82.6) Unig25D08a (82.7) ESTS183
84.6 pAR0319a pAR0024b pAR3-36 pGH310 Gate3BB10a (85) pAR0161a (85.1) pAR05G10 (85.4) AEST009a Coau1E01 see below
87.5 Coau4B05 pAR0231 (87.7) pAR0024a (89.1) G1238 (89.7) Gate4CB01
90.5 FLS2a Gate1AH03 pAR0173d PXP4-66a (91.2) G1031 (91.9) A1311 pAR0664 A1046 BNL1694 pAR0402 pAR0512 see below
93.9 pAR0294b Unig22B11a (94.8) Unig25H04a (95.8) pAR0210a (96.2) pAR01B07 (96.4) A1604 pAR0979 pGH267
101.1 pAR0210b (102.1) PVNC102 (102.4) pAR0820 Gate4BG08 P02-64 (103.1) Gafb21I11 Gate2DE01 (103.5) pGH390a
104.4 G1150 Gate1CG02 pAR09E07a pGH396 pGH792 PXP3-35 (104.9) Gate2DD02
107.4 Gate1AH04 (108.2) pAR03C09 (109.1) G1261a pAR0324 (110) Gate1AD04a pAR0330 pAR0825a
110.4 Gate3BE12a
113.6 Gate4AE08a (115.3) PVNC030 BNL3008 (115.8) ESTS196 (116.4) Gate2BD04a pGH277 Gate4CD12a A1182a
118.1 Gate2BF11a (119.5) Unig27D04 (119.8) Unig23G04 (120.7) Coau3C04 Gate1AG04
121.6 pAR0295 pAR0869 (122.5) Coau1C04 pAR06A09 (123.2) pAR0712 pAR3-30
125 pAR0410 (125.2) BNL1597 pAR0615 pAR0624 (127.3) pGH408 pAR0564
128.6 Gate3DG07a (129) Unig22F10a (129.1) Coau2G19 P03-02 (130.8) Unig25B05 (131.3) pAR07A02
133.6 pAR04D01 (135) pAR0997
138.6 Gate4AC04 pAR0139a pAR09B08 G1185 (140.6) coau4N19 (141.2) A1291 pGH855a
143 ESTS126 (144.8) pAR0139b
146 Gate1AC05a (146.9) Gate1BD08 Gate1DB07 pAR10F06 (147.4) Gafb22L22 (148.3) A1597
149.7 pAR0048a (149.9) Gate3BA10 Gate4BF05 pAR0656 pAR0662 pAR0720 Unig26G08a
155 pAR0888 (155.8) Gate1BE05a (156.1) Unig23C07 (156.2) Unig06B10 (157.3) Coau1K20 Gate1AB03
159.1 pVNC164a G1158 A1620
169 Unig28A10 (170.3) AEST109 pAR0237b
173.5 pAR0934a (174.3) pAR0763
176.4 Gate1CF01a (177.3) pAR04D08b
183.7 A1135a A1478 (183.8) A1280 Gate1CF06 PAR0395 (185.5) Gate3DF04 (185.8) Unig24E11a
187.4 pGH574 (187.5) PVNC127
191.8 Gate4CF04a
195.4 Coau2C21 Gate4CF04b

(72.2) Gate3BE11a Unig26C04a
(78.8) Unig06D05a
(85.4) pAR04B03 (85.9) Gate1AE01 PXP4-05 (86.2) G1006 G1045a (86.5) pAR0161b (86.6) pAR0319b pAR0040 pAR0173c
(86.6) pAR0887 CMS14 BNL1551 BNL3090a pAR0285a pAR0291a Unig23A09 Unig25G01a (86.9) pAR0285b
(91.9) pAR0579 Unig28E03 Unig28G08 (92.4) pAR0941a pGH646 (92.8) pAR0294a A1437 Coau3J21

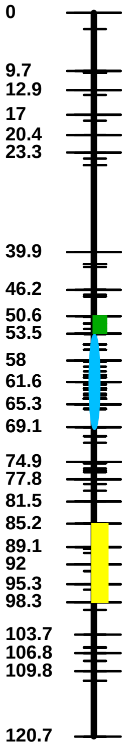
C02 (176.4 cM, 194 Loci)



0	pAR0939b pAR0941b Coau4H11 pAR0658
5.4	pAR0784 (7.2) A1126
9.6	CMS21a (9.8) Gate4DB12a Gate1DH11 (10.6) Gafb14K15a pAR06F11
13.8	Gate1BC01a (14.6) BNL2440 (15.4) Unig25B04 (16.1) Gate4CA01a
20.8	PXP4-63b (22.3) Gate2DE06 (23.4) Unig25B08b
25.6	A1387 Gate3BD01a
28.8	Coau1I11a (29.4) Gate4AH09 (30.6) pAR0357 Gate3CC02b pAR0848 pAR0121
37.5	A1485 pGH487 G1051a (37.9) G1051b (39.4) Gate4CD05
40.4	Unig28A09a (41.1) Gate3DG05a Gate3CC02a
43.5	Gate2BG02b (43.8) Unig23C08 (45.6) A1155
46.7	pAR0019 P02-58 pAR0475 pGH549a Unig26G08a (47.8) A1257 pGH624
50.4	Unig22D04
55.5	pAR01G03 (57.9) pAR09F09
59.1	pVNC153 pAR0957 pAR0775 pAR0906 (59.7) Unig25C11 (60.1) pVNC201a (60.8) pAR0405 pBAM291a Unig26F09a (61.2) see below
62.4	Gate2BE10 (63.4) A1225 A1794 pAR0607 (64.2) Gate1CD07a Gate4AH11 (64.6) pAR0786 pAR0817
65.9	pGH248a (67.2) AEST048a (67.7) A1109 A1588 A1738 PBAM286 (68.2) Coau2E14 (68.3) AEST018 (68.6) Unig22C02
69.8	Unig27E09 (70.1) Gate3BC09 (72.2) G1065 A1720a pAR0011 pAR08E03b pVNC094
73.1	Gate1BB12 (74.5) Gate3BF02a (75.8) Coau2L06
76.2	Gate3CC07a (76.5) pAR0179a (77.6) P01-03a P05-39 (78.5) pAR0571a pAR0088 Coau1M07a A1686 P05-32a Unig24B11a
80.1	pAR0297 (81.6) pAR08C07a
83.4	Coau3D18 Unig22D06a (84.4) Coau4A11a BNL2921 pAR0226 (84.8) pGH273
86.8	Unig25A07 (88.6) Unig28E05 (89.5) BNL3090b PVNC142
90.2	Gate1BA10 (90.4) A1340 pGH661 (91.1) Gate4CD03a
93.3	C209 (94) P05-31 (94.9) Gate1AH09a (95.6) Coau2O20
96.7	A1593a AEST130a FLS2b Unig27A11a pAR0077a pGH468 A1643a
100	pAR0245 (102.8) BNL3345
108.3	Gate4DA07 pAR0959a
112.6	Gate4BD03
116.8	Unig22C01a
123.2	PXP3-42 pAR0935 Unig25B08a (125.8) CMS25 G1097 G1171
126.1	A1204b (126.4) pAR0132 (126.8) Unig26B06a pAR0077b Unig27H12a (127.2) Unig26H12a (127.9) Gate1DB11a (128.8) see below
129.2	Gate1CB06 (130.1) Gate2BG02a Unig26F09b (130.2) A1628 (130.3) pAR07F10 (130.5) pGH650 (130.6) A1643b Coau1E09 see below
133.2	pGH431 (134) AEST005 (134.5) Coau2M13 Coau1M01 Gate1AB12a
139.7	M16-078 (141.5) AEST023a
147.3	Coau2I20 (148.9) pAR099
150.4	Gate1DG06a
153.4	Unig24H12a Gate3CE05a
156.5	AEST048b AEST139a P01-03b CMS09 pGH618 A1549 (157.4) Gate1BG09 Unig24B11b
160.7	Gate2AC04 (160.9) A1553 (161.7) Unig24F02a
166.2	pAR0052 (166.3) pAR09D01
169.9	pAR08C07b pAR08E03a (171) Gate4AA09a
174.1	PXP4-63a (176.3) Unig24G07a Unig28D11a (176.4) Unig24G07b A1593b Gate1AB12b Gate2DG06 Coau2E03

(61.2) A1691a P09-54 pAR0705 A1097
(128.8) Gate1DB11b
(130.6) Gafb26N16a (130.8) G1188 (130.9) BNL3888a A1204a (131) Unig25D08b Coau1O13

C03 (120.7 cM, 149 Loci)



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9.7 A1100 G1071a pAR09F01 (10) Gafb11P04a Gate1AF02 pAR1-56 Unig25G07a

12.9 pGH457 (13.7) Unig24B07a

17 Coau2M03 (18) A1748

20.4 Gate3AG04b pAR0805 PXP2-42

23.3 Coau4H06 (24.3) A1583 (25.4) Gate1BD11a Gate3BE12b Unig26E06

39.9 Coau2I16 (41.9) A1345a A1650a G1223 Gate4BF10a pAR0750 (42.4) Unig26G03

46.2 Gate2AC01 pGH639 (47) BNL1034a (47.3) Gate1CD08 Gate4BE01

50.6 Gate1BE07 (50.7) Gate4BC01a Gate4CD12b pAR1-08a Unig06D07 (51.8) M16-121 pAR3-20 (52.7) pVNC059

53.5 A1182b (53.6) pAR0030 pAR0185 pAR08E06a (55.3) Coau2C23 G1226 pAR0149a pGH498 Unig25D01 (56.2) see below

58 Gate1CC10 (58.1) A1834 pAR0257a pAR09B12 (58.2) Coau4A11b (59) A1338 (59.8) Gate1BH01 (60.4) Unig24B10 see below

61.6 Gate2CD07a (61.7) Gate4AB10 (62) Gafb15O14 Unig22B04 (62.6) BNL3955a pAR0172a pGH619 PXP3-44 (62.9) see below

65.3 pGH379 (65.4) A1171a (66) pAR0172b (66.1) A1824 G1030 P02-49

69.1 pAR0847 (70.6) AGR0689/93C12E5 Unig24G08a Unig24G08b (71.7) Unig23D02b

74.9 Coau1M21a pAR0151 Unig27C04 (75.1) Gate1BC01b pAR0076 pAR0396a pAR4-46a (76) Coau1O15 (76.3) Gate3BA04 (76.6) see below

77.8 Coau4H19 Gate1CB05 (78.6) Gate3BC07a (79.7) Gate4AA05a

81.5 Unig27G05

85.2 A1436

89.1 pAR0494 (89.4) AEST031a PAR0316 (90.1) Gate3CE05b

92 Coau2G03 (93.1) pAR1-09 pAR4-46b

95.3 AEST063 (96.2) Gate3AG04a

98.3 pGH549b (99.6) Gafb22M15a

103.7 Unig23D02a (105.8) pAR04G11 (105.9) PAR0851

106.8 Unig25C09 (108.1) G1168 pAR04H02

109.8 G1259 (111.4) G1128 PAR01-54 pGH248b

120.7 PAR09D10 Unig23E03a

(56.2) Gate3CB03 pAR0149b pAR2-26

(60.4) Unig24C11a (60.8) A1536a A1683 Coau2O04 pXP4-01a

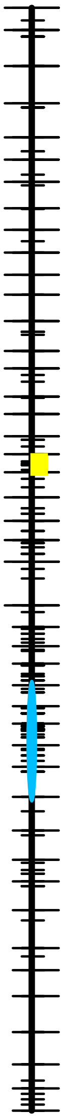
(62.9) pGH549a (63.5) Unig24G11a (63.7) Gate1CD07b (63.8) PXP4-01b (64.3) BNL1667 BNL3971 (64.4) A1146 G1258a Gafb13B07

(64.4) Gate3BE03 Gate3CF08 Gate4CB06 Gate4DE11 BNL3408 pAR0250a pAR0318 PAR0499 pAR0701 pGH395

(64.4) pGH399 pGH430 Unig24G02

(76.6) BNL1145 pAR04H03

C04 (183.8 cM, 208 Loci)



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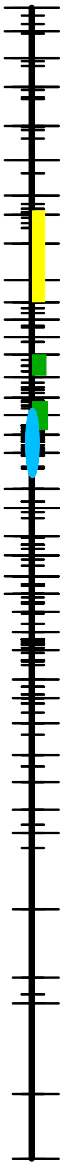
3.7	coau2I12 (4.8) Gate1AA02 pAR0540 G1114 A1783
9.7	pAR1-03
15.9	pAR03H03 Gate3BF10a pAR0503 (16.6) Gate1AF08a P01-08 pGH742
21.6	Gate1CE09 (23.9) Gate4CH11 pAR06G04
25.3	pAR0792 (27.8) A1698
29	Gate2CC06 (29.6) Unig22C05a
33.4	pAR0248a (33.5) A1216 A1706
37	pAR0968 (38.9) Unig23G01
40.8	pVNC280a
44.5	Coau2E05a BNL3860 P05-04 P05-37
47.8	A1679 A1731 Gate1AF01 M16-088 P06-26a
52.2	G1261b PVNC128a (54) Gate2AC11a pAR0571b pAR0972 (54.5) Gafb16D09
57.2	Coau2A22a
60.1	pVNC244 (61.2) pGH242 (62.3) Gate2BF03
64.8	Gate4DD02 (65) BNL3556
67.7	pAR0571c
71.4	A1412 BNL3255 (72) Gate4AD12a G1074a (73.1) Gafb22M15b
74.4	Gate3AH02 Gate4BG06a Unig22E12a BNL2961 (75.6) pAR0813 (75.9) Coau1O15a (76.2) A1353 Gate4BE09 PXP1-77a (77) see below
77.4	Unig22F09a Gate4AD12b pGH244 (78.5) pGH724a (79.9) A1108
81.6	AHD3a (83.4) pAR0476b pGH797a (84.3) Gate2CD09 PVNC035
85.5	A1691b Unig25B12 (87.2) pAR0594 pAR09A08a
88.7	Gate1DE02 pAR0010 (89.2) Coau1O15b Unig24D03 (89.9) Gate1CE03 (91) pAR0523 Unig27G11 pAR0785 A1562
92.3	pGH317 (93.5) Coau1E19 (95.1) Gate1CH03b
99.6	Gate2BF02a pAR03A12 (100.7) Gate4CF12a
103.2	Gate3CE06a (103.5) Gate2BC04 (104.3) Gate4DE09a pAR07D04a (105.2) G1008 (105.8) Gate1CF01b
106.4	Coau1G05a Unig24G08c (107) Gate3DD06 (107.2) Unig22C03
109.3	Gate3CH11a pAR0218a pAR07D04b pAR1-26 (109.6) Gate4BG11a Gate1DF03a Gate2CC12 Gate3DE09 (111) see below
112.9	G1018 BNL3792 pAR0953 pAR1-40 (113.5) pAR06D11 (114.1) Coau2A11 Gate4AH08a Unig27F10
116.4	P10-56a (116.7) Gate1AB06 Gate3DA02a Unig27F12 (117.6) Coau2B08 pAR01D12 M16-200 P05-09 pAR0798 see below
119.3	pAR3-47 Unig27C12a A1632 pVNC164b Gate4DA08 A1401 pAR0418a (119.4) G1272a pAR04F07 (119.7) A1590b see below
122.9	Gate1DB08 pAR0332 (123.5) Gafb13B07a (123.7) Unig06G04 (124.6) Gate1BF02a Unig25C01 (125.5) Gate3CH11b
126.5	Gate1BH09a (127.3) A1348 pAR4-11 Coau2C15a Gate1AG10 pAR0309
131.5	G1010 (133.9) Gate4DF01a
137.1	Gate1CA10 (137.9) Coau2A22b
142	pAR0789 (142.5) BNL3627 (143.7) pAR3-23 (144.3) AEST048c Coau1M06
145.6	Gate1BF03a (146.4) P01-46 A1658 A1197
150.4	P07-04a (152.1) pAR0978
156.7	G1101 Gate2BC08 Unig23H12 (158.1) Gate3CG03a
160.4	pAR01A05
164.7	pARC-04
170.7	G1078 Unig26G07 Gate3BB05a
176.1	Gate4CB07 (178.8) pAR0123
180.1	G1276 (181) Gate3BE04a (181.9) A1811 (182.8) pAR0490
183.8	Gate4DG08

(77) Unig06D12a
(111) pVNC149a (111.4) pAR0854 pAR07D04c (112.1) A1345b A1828 pAR3-15
(117.6) Gate2CD01 pAR0118a pGH318 A1667a Gate4AC08
(119.7) pAR0118b (119.8) A1168 (120.2) A1590a G1013 Gate2CF02 P05-24 (120.3) pGH422 (120.4) BNL3257 P01-02 (120.5) pAR0973 (121.1)
(121.1) Gate1CC03 (121.6) P05-18 pAR0950 pAR3-07

C05 (191.9 cM, 246 Loci)



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3.9	pAR0582 (4.3) ESTS152
8.4	Unig27H04 (8.9) Gate4DE09c (9.7) P05-32b
13.2	Gate3BF01 (13.7) Unig23G06 (14.9) Gate1AG12a (15.2) Gate1DG09a Coau2I05a
19.7	Gafb25M09 (19.9) Unig25A02b (20.4) Gate4AB01 (21.8) Unig28C03
25.4	LXP06 (27.6) pAR0043a Gate1CB10a Gate4BD11b
31.3	Gate3BE12c (32.7) Gate4CF10a (33.5) Gate3CD01a Gate3DG07b (34.1) A1580 Coau4N12a Gate3BF06b
34.5	pAR0723b (35) pAR0129a (35.9) G1012 (36.7) pAR0451 C102 P05-06
39.3	Gate3CD01b Gate4CF10b Gate3BF06a Gate4BD11a pAR0723a pAR0932
45.4	Gate1AD07 Gate3CC11
49.1	Unig25A02a (50.1) AEST130b pAR06C08 (50.9) Gate3DG07c
52	G1076a (53) G1210 (53.3) pAR0129b
54.9	AEST157 (55.7) pAR06B12 pAR10A02
57.8	pAR0390 pAR07F02 (58.7) Gate3BE12d (59.7) Gate1BE06 Gate4CA07 Gate4DB08a pAR0470 pAR04E07 (60.6) see below
61.6	Coau2A04 (62.5) Gate3BE11b (63.3) Gate3CD02 BNL3888b pAR0545 (63.7) pAR06C03 (64.2) pAR0945a
65	pVNC097a (65.1) pAR1-22 (65.5) G1048 (65.7) Unig06G11 G1148 (66.3) LXP17a pAR0250b (66.8) A1118
67.9	Gate2DH05a (69.6) Gate3BB01b Gafb15F06 Gate4AE09 Gate4BE02 Gate4BG11b Gate4CF02 P02-35 Gate4AD09 see below
71.2	Unig26F10 (71.3) Gate2BC05a (71.4) AEST055a G1261c A1497 (71.6) Unig25A01a W07b (71.7) Unig23D03a (71.9) see below
74.2	Gate3DG05b (74.4) A1433 (74.6) CMS17 P09-53a pGH551 BNL1667c (74.7) LXP43 (76.5) A1474 (76.8) BNL2882 pAR0056
80.2	Gate4AA05b (82.3) Gate1AD01 Gate1AD08 Gate1DF03b pAR0180a pGH739 Unig22G01
83.4	G34A3-3a Gate1CD07c pAR04F10 (84.1) Unig25B10 (85.1) Gate4DC02
88.1	pAR0110a (88.3) Gate3BE11c Coau4F01 pAR0249 Unig28C12 (89.5) Coau2F22 G1277 pAR0180b (90.2) A1788
91.3	A1222 Unig06F11 (92) A1145 (93) Coau4E21
94.8	Gate1BC04 A1449 (96.1) pAR0387 pGH358 (96.4) pAR1-36
97.7	pAR0216 (98.3) A1530 (99.1) P01-45 (99.3) BNL0226b pVNC021
100.7	ESTS175 (101) PGH740 (102.7) pGH550
104.1	Gate4DA02 (105.3) A1167 Coau2E20 PXP3-28 pAR0459 BNL3034 pAR0955 pGH699 W07a (105.6) Coau4A15 see below
107.1	G1164a (107.6) Gate3BE09b (108.8) Gate2BB02 pAR0307 pAR0815 pVNC201b (109) Gate4AB05 (109.6) AEST146 see below
112	Gate2CB02 (113.2) pAR0764a Unig27E01 (114.5) Gate3BF12a Gate3BG09a
115.1	G1129 pXP3-89a Gate2DG04 pAR0355 (116) Gate3BE09a Gate4AH03a (117.5) pAR0325
119.3	Coau1M17 (121.2) BNL0226a
124.6	Coau1M05a PXP2-60 (126.5) PXP3-89b PXP5-28
129.1	Unig28F05
133.7	pAR0398a (136.2) Gate3BB01a Gate3CG08
137.6	pAR0288a (140.1) Gate1DG04b
150.3	G1164b
161.7	BNL3932 (164.5) pGH678 Coau3L11 pAR0175 pGH374a
166	G1124 pAR0492
181.1	Gate1DG06c
191.9	Gate4AH03b Gate1BF05b

(60.6) Coau1M15 Gate1DA03 PXP4-65
(69.6) Coau1L22 BNL3502 pAR0358 pGH812 (69.7) A1325 BNL1667b (69.9) Gate3DC02a (70) BNL1667a pGH549c (70.1)
(70.1) BNL3971 (70.2) pGH625 Unig26C03a (70.6) A1171b Coau3B05a G34A3-3b (70.7) Gate4CD03c gate2DG02a pAR0050a
(70.7) pAR0879
(71.9) Gate2BD04b Unig28F06 Coau1J10 (72) pVNC313 (72.3) G1269a Gate3CF07 A1148 pGH442 BNL1059 (72.9) pAR4-14a
(72.9) pGH364 pAR0071 (73.3) pAR04G06a (73.5) ESTS154 (73.6) pAR01A03 pAR0429 pAR04D09 pAR04G06b pAR08E07 (73.7)
(73.7) pAR03E02 (74) Gate1BG11b
(105.6) P01-18 (105.9) Gate4AE05 G1147 (106.2) A1727 G1044 M16-161 UN1121 (106.7) Coau1L18
(109.6) A1418

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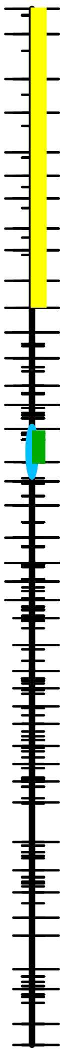

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11.7	coau3L05a (14.3) pAR0510
17.3	Gate1BG06 Gate4DF01b (19.5) Gate4DE08c
23.9	A1124 Gate4CB03 (24.8) pAR1-53 Unig23G12a Gate3BE06 Gate3CB01
27.8	Gate4AH01 Unig23G12b Unig24F05 (29.7) Gate1AD03
31.6	Gate1BE05b (33.2) Gate1AH08b pAR0497
36.6	pGH681 (38.1) W05
40.2	pAR01B05 (41) pVNC121
45.3	pAR0288c
49.8	A1737
53.9	Gate1AE12 (55.8) pGH333 (56.2) Gate3BE07
58.2	Gate3BH06 (59.7) BNL4049 (60.4) pAR09D07
62.8	pAR0547 Unig06D01 (64) Gate4CC06 (64.2) Unig25E04
66	pAR0144a (66.5) Gate1AB08a (67.3) Unig22D10 (67.7) Gate3BE02 Unig27G12 (68.2) 5SrDNA Coau1H02a Coau4J11 see below
70	G1040 pVNC251 (70.6) Gafb18L24 (70.8) Coau2K19 Gate2CC09 BNL1162 BNL1423 BNL3626 (71) pAR0127a (71.8) see below
75.5	Coau4H09a Gate4DE09b Coau2C14 Gate1AD04b (78.2) PXP1-48
78.7	BNL3948 (79.1) Gate3CG11 (81.1) Gate2CB03 (81.2) BNL3031b pAR1-12
82.7	pAR0474 (85.5) Gate3BB05b Gate3CG03c Unig27H12b Gate4DF03a Gate1AB09a
88.1	BNL3031a Coau1H12a (89.5) A1179 Gate4AD05a (89.7) Unig28D07
92.3	pAR0117 A1270 Gate2BD10 (92.6) pAR0085 pAR0328 pGH390b (93) Gafb14A21a pAR0266 pAR0442 (95) Coau1C24 see below
95.4	Gate1AC05b P03-23 pGH786 (96.4) Gate3AH03a (97) pAR0341 (98.2) pAR0619
98.5	Unig24A07a Gate3CD01c (99.6) BNL3582b pGH647 Unig23E08 (100.1) G1267b Gate4AD03 pAR0206a (100.2) see below
101.5	pAR0419 pAR08A06 A1471b PXP4-06 (101.8) Gate4BC12 (102) pGH594 (103.2) pAR0562a
106	AEST055b Coau2E02 (106.7) Gate4CA09a (108.6) Coau1N16
110.3	G1014 Gate1AE10 pAR0808 Unig26E09 A1744 (111.6) pAR0055a G1267a pAR0008a pGH502b Coau2A01 see below
113.2	G1050 pAR10D05 pGH502a (113.5) PXP4-44 (114.1) Coau1H12b
116.2	Coau1I11b (116.5) Unig26C11a (117.7) Gate3CB12
119.1	Gate1AA01 (120.4) Gate2BE06a (121.2) Unig25A09 (121.8) pAR04E02a A1606
122.8	A1517 (123.1) pAR0963 (123.7) pARC-15 (124.7) Gate2BE06b
125.8	AEST045 (126.5) Gate3DA04 (128.1) Unig27B04 Unig28D02 (128.2) Coau2A21 (128.4) BNL1030
128.7	AEST263a Gate4DH06 pAR0022 (129.6) Coau1L04 G1076b A1733 (131.5) BNL2590
132.2	coau2N18 P10-62 (132.4) pAR0209
138.8	Unig27C12b (139.4) pAR0279 pAR10G06 (140.5) pAR0240a pAR07C05 (141.1) Gate4AD12d (141.5) Gate3CF09
143.5	G1155a (144.6) pAR0514 (144.7) Gate4DE09d (145.4) Gate1CF01c (145.6) Gate4DB01 (145.7) pAR0505 (146.2) pAR0873
147.2	pAR07C01 (149) Gate4BA10a
151.4	PXP2-05
154.4	pAR0386
160	pAR0804 (161.2) G1121 Gate1AF08b pAR0129c pAR0892 pGH855b pVNC147 P02-37 Unig26B08 (162.1) P02-27 (162.8) see below
163.3	A1162 (164.2) Coau1H15 BNL4053 A1707 (164.6) A1482 (165.6) Unig24F02b
169.1	Gate3BF10b A1194 A1608 pAR0704 pGH558
172.6	A1219 Coau2C13 Gate2AA02 Gate4AE03

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(71.8) P08-36 pAR0068 pAR0144b Unig23E02 P12-12 Coau1H02b Coau2C12 Gafb23A18 Gate4CA02 pAR0127b pAR1-33

(71.8) pGH730 pVNC164c Unig22C04 Unig22F09b Unig27G07b

(95) Coau1L24 BNL3582a

(100.2) pAR0771a (101.1) Gate3DC04 P03-07

(111.6) A1471a M16-125a (111.9) PXP4-23 pGH783 (112.4) pAR0096a

(162.8) pAR0144c Unig24E02

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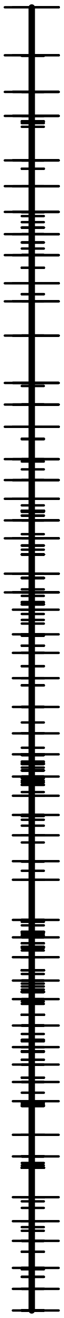

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8	Unig23B03a (8.1) Gate4BB12
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18.1	Gate4CD10 (19) Coau1M13 Unig23B03b (19.3) A1547 (19.9) pAR0044a
25.5	NBS008c (26.9) pAR0003b pAR0286b
29.8	Unig22D03b
34.1	Gate1BF09a Gate1BF09b pAR0101b pAR0073 pGH767 Unig22D03a Gate4CD11 pAR0044b pAR0101a see below
37.8	Unig22H11a A1316 Gate1AG01 Unig22F12a (39.2) pAR0207a pGH243 (40.2) pAR03G05
41.3	pAR0110b pAR03G03 A1460 pAR03A11 pGH743 (43.4) P10-10 pAR0110c pGH745
46	Gate4DC07a (47.8) Gate1BD11b Gate3CB09b
49	M16-040
54.7	Gate4AG09
62.6	Gate2AC11b (63.1) pAR0864
66.2	pVNC180 pGH322
69.9	Unig28E02 (71.9) Coau2K17a pAR1-21 (72) Unig22F10b
75.3	pGH782 (75.7) A1188a (77) A1178
78.8	pBAM422
81.9	pAR08C01 (83) pAR08C07c (83.9) CMS41 Gate1BH08 NBS008b pGH312 Unig26B04b (84) Gate4DF12a Unig27D07 (84.1) see below
85.5	Coau1O15c (87.8) pAR01G07
88.5	Gate3BB01d Gate4AC11a pAR0003a pAR0535 (89.7) Gate3BC07b pAR03E08 (90.4) Gate4BC10a (91.2) Gate4BC10b see below
94.4	Coau1B02 Gate4DB08b BNL0625a (95.1) A1185 Gate4AA05c A1660 Unig24E10 (97) pAR0537
97.5	BNL2805 (98.1) pAR0240b (99.1) Gate1DG09b (99.2) Gate2AF02 (99.5) Gate4BB01a Gate4CC01 Unig23D04
100.4	Gafb14A21b (101.1) BNL2632 (102.1) pGH778 (102.7) pAR04A07
104.5	Coau2E15 (104.7) CMS46 BNL3997 (106.4) AEST031b pAR2-02 pAR0207b
107.6	pAR0038 (109.8) Gate1BF07b Coau4D17
111.8	pGH378 (113) Coau2M09 Coau2M19
116.6	A1174 Gate2BE04 (119.2) AEST051
121	M16-198 Unig24A10a (123.4) Unig24A10b
124.5	G1045b Gate1DG01a pAR07E12 (124.6) Unig24A10c pAR0024c pAR0178 pAR0319c (125.7) pAR0319d (125.8) see below
128.2	P01-24b Unig27H12c (128.3) Coau2D20 (128.5) PXP3-66 (128.9) Gate3CH01b (129.2) Unig06D05b (129.6) A1190 Coau2C15b (130.8) see below
131.4	pAR03A09 Gate3CH01c Unig25C02 pGH505 Unig25G01b
134.6	Gate1DD10 (134.8) Gate4BD07 (135.4) pAR0966a (136.4) AEST064
138	AEST009b A1415 (139.2) pGH320
142.3	Gate3BC03 Gate4DB02 (142.4) AEST130c (143.9) Unig25H02b
145.4	Gate3BB10b
152.1	pAR0163a Gate4CF12b (152.4) Gate4DA04 A1413 (153) A1464 (154.1) pVNC248 Gate4CC04 A1684 Coau2G11 see below
155	Coau2E13 Coau3B23 pAR0636 (156) Coau2G24 BNL3411 (156.6) Gate1CE01a pAR06B09 pAR09E07b (156.8) see below
158.3	Gafb24M11 Gate3BB02 Gate3BG11a BNL1151 BNL3431 (160.5) G1230 P10-27 pVNC219 pAR0944 BNL3171 see below
162.2	Gate2AC02a P07-04b (162.7) pAR0708a (163.2) Unig25H04b (163.7) Unig06C04 (164.1) pAR0754 pAR09C05 A1523 see below
165.3	Gate4DC05 Unig24B07b (165.7) pAR0708b (166.1) M16-091 (167.9) pAR04A08 A1345c pAR4-34 Unig06E08 G1261d see below
169.7	G1054a Gate4AA10 Coau2C24 (171.1) Gate3BB01e (172.1) Gate2BH11a pAR03D05 (172.3) G1020 Gate2CA09
173.3	Coau2K06 (174) pAR04C04 G1057 (174.1) A1759a (175.4) Gate1AH08c Gate4DE08d
176.2	BNL1034b (178.4) A1125 pAR0181 G1082
179.1	G1032 (180.9) Gate1BF07a
182.3	G1209a (182.6) Gate4AA09b (182.9) pAR07G02 (183) pAR08B09 (183.1) Gate2CC05 pAR0260
187.9	Gafb22M15c
191.5	Coau2E22 Gate2BC02 pAR0108 W06 (192.6) P01-42 (193) pAR0144d (193.4) A1154 A1531 BNL3442 pAR08B09 see below
198.3	pAR0890 pGH269 PXP1-11a (199) Gate1BF02b (200.1) Gate1AF05
202.3	pAR0922 (203.3) Unig22E12b (203.9) Gate3DH07
205.6	Unig24G08d Coau3N02 pAR0650 pAR10E10 (207.4) A1346 pGH843
210.1	P02-45 (210.3) Gate4AF05a pAR3-26 (211.6) A1181a Gate3BF02b
213.6	G1199 P06-57a
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(125.8) Gate1DD03 (126.1) A1400 Gate1BC11 A1717 (126.7) G1095 (127.2) Gate1DG01b pGH445 Unig24A10d
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(154.1) pAR0843 (154.4) P13-07 (154.7) pAR0163b
(156.8) Unig23D11 (157.2) Unig22B11b
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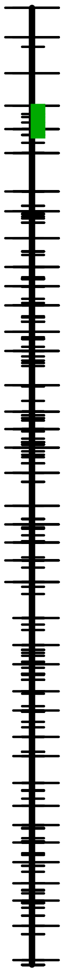

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10.9	BNL4059b pGH711 PXP2-75 Unig25H12
16.3	Coau2I09a Unig22D07 $^{(17.7)}$ pGH829 $^{(18.2)}$ pAR0037a $^{(19.1)}$ pAR3-42
20.2	pAR0006 $^{(21.2)}$ BNL3368 PXP1-73 $^{(22.5)}$ pGH492
24.2	A1198 A1386 G1081 Gate4BE12 pAR0585 pAR1-24
30.6	Gate1DA06a Gate4CA11 Unig28B06a $^{(33)}$ G1037 Gate2BG06
33.9	A1252 pAR3-21 $^{(34.3)}$ A1572 $^{(34.4)}$ coau2I09b $^{(34.8)}$ Unig25D04 $^{(35.1)}$ A1310a $^{(35.8)}$ Coau1G05b Coau4K03a Gate1CE12 see below
38.4	pGH413 $^{(40.6)}$ Coau1E07 Gate1CB04 pAR0183 $^{(41.2)}$ Coau4G22
43.2	Gate2BH08 pAR08H02 Unig06D12b $^{(44.9)}$ pAR0243 $^{(45)}$ Unig28D04 $^{(45.2)}$ A1111 G1263 Gate1AE09 Gate1BE09 see below
46.4	Unig06D12c $^{(46.5)}$ pAR0229a pGH724b $^{(48.5)}$ Gafb11P04b $^{(49.2)}$ pAR0999
49.6	G1261e pGH797b $^{(51.4)}$ G1155b $^{(51.6)}$ G1071b pAR0229b $^{(52.3)}$ Gate3BC08 pAR0608 G1203 A1210
54	G1061 $^{(54.9)}$ Gate4CG06 $^{(55.2)}$ Gate1BC03a Gate1CC05a Gate3DC02b $^{(56.5)}$ Coau2O24b
57.2	AHD3b $^{(58.1)}$ pGH592 $^{(58.8)}$ Gate2BH06 $^{(59.2)}$ Unig24C11b $^{(59.7)}$ pAR0757
62.9	Unig06C06 $^{(63.1)}$ Coau2C06 $^{(65.5)}$ BNL2495
67.3	G1063 pAR0488 pAR0837 pGH845 Gate2BD04c $^{(67.9)}$ pAR0054 G1026 $^{(68.4)}$ Gafb28I12 Unig24G11b $^{(68.8)}$ see below
70.2	pAR0567 $^{(70.6)}$ gate2DG02b $^{(71.8)}$ ESTS146 $^{(72.4)}$ pGH706 A1776 pAR04A05 pAR07B02 pAR10F12b $^{(72.8)}$ P06-25 see below
73.3	P10-66 P10-67 $^{(73.9)}$ Coau2I13 $^{(74.5)}$ pAR10F10b $^{(74.9)}$ Gafb29C08 $^{(75.9)}$ pGH565a P01-52 A1453
77.5	BNL0341 $^{(79)}$ Gate3CA02 pAR0155 pAR0563 pAR10F10a
83	pAR1-11 $^{(85.2)}$ Gate1CE04a pGH695 pGH565b pGH540
86.1	Gate3AH03c $^{(86.6)}$ Gate1BC03b $^{(86.8)}$ BNL0625b pAR0179b $^{(87.9)}$ A1188b $^{(88.9)}$ A1792 Gate1AB09b
89.1	pAR01C06a $^{(91.6)}$ Gate1AC08
92.1	A1607 pAR0051 Gate1CD11a Gate4AF05b pAR01-19 pAR0354 PXP2-79 $^{(93.3)}$ Gate4AH03c
95.7	Gate3BG09b Gate4AF08 Gate4DC07b $^{(96.5)}$ Unig25A02c $^{(97.7)}$ BNL1227
101.7	pAR01C06b Unig26C04b Unig27G02a $^{(102.8)}$ Gate2CE08 $^{(103.7)}$ Unig23H04
106.2	A1524 G1212 $^{(107)}$ A1557 Unig25C10 Unig27G02b $^{(107.5)}$ Unig26D07a $^{(108)}$ Unig06B09 $^{(109)}$ Unig26G02 Unig28G04
109.4	Gate3CE06b pAR03B07 $^{(110)}$ Gate4AE01a $^{(111)}$ A1740 Aco1 pAR0565 pAR0982 pAR1004 $^{(111.2)}$ Gate4DE02 $^{(112)}$ see below
113.9	G1070a Gate1CD02b pAR0218b pAR0603 pGH777a $^{(114.3)}$ Gate3CG12 $^{(116.4)}$ Gafb22M15d
117.1	pAR08H03 $^{(117.2)}$ pAR0144e $^{(117.3)}$ pGH405 PXP2-78 A1719 CMS37b BNL0840 pGH737 $^{(119)}$ pAR0984 $^{(119.9)}$ see below
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124.7	pAR0218c
129.2	Gate1AG12b $^{(130.4)}$ Unig25G11b $^{(130.5)}$ Coau2M07 $^{(131.8)}$ Gate2BF02b
133	Unig22D06b
136.2	pAR01D07 $^{(136.7)}$ Coau3D09 pVNC190b $^{(136.8)}$ A1127 $^{(138.4)}$ A1780 $^{(138.9)}$ Unig24C07
139.1	pAR0265a pAR0479 Unig24D12 $^{(140.9)}$ pGH331 $^{(141.2)}$ Gate2AC07
142.4	Gate4BC01b $^{(143)}$ P02-08 Unig26B09 $^{(144)}$ Unig28B03
145.9	G1005 A1807 G1176 A1685 pVNC093 $^{(147)}$ pAR03C01 $^{(147.1)}$ Gate3BB04 $^{(147.6)}$ pAR1-17
148.8	Unig26H12c $^{(148.9)}$ Gate4AH02 pAR0764b $^{(149.2)}$ pAR0764c S11b Unig22C01b $^{(150)}$ Gate3BF02c $^{(151.3)}$ Gate4AG11 see below
153	Gate3CC06 $^{(154.4)}$ Gate3DB08 pAR0177a G1045c
158.7	Gate4CF12c $^{(159.5)}$ G1209b pAR0308 pAR08B12 pGH497 pAR0177b

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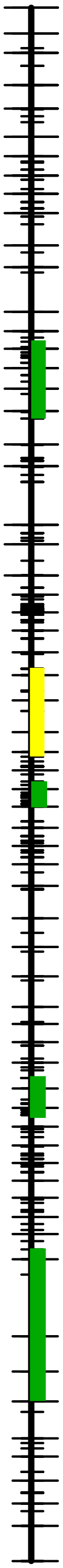

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17.2 pAR09G10 A1135c G1137 Gafb08C24a Unig22F08 PXP2-84 (17.3) P02-03 pGH225 (18.5) pGH489 (19.5) A1567
22 pAR0998
25.3 A1259 (26.2) Unig06G09 (26.4) PXP4-73 (27.6) A1475 pAR0065a
28.6 Unig22B08 (29.3) A1634 pAR0169a (30.9) BNL3452
31.7 A1448 pAR0278a (33.1) pAR01E01b pAR0339 pAR03A07 pAR0771b (34.2) A1808 Gate2BF02c M16-045 pAR0065b see below
35 M16-085 pAR0062 Unig28F09 (35.6) Gate3BG11b Unig23F09 (36.9) Gate1CC05b
40.5 pAR01A01 (41.7) pAR0237c
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51.8 pAR07G07
55.1 P02-09 (55.2) A1467 (56.2) Gate4AA02 (56.9) Unig27H11 (57.8) Gate1CC04b G1112
58.1 G1386 pGH372 (58.7) Gate1CC04c G1180 (59.2) pAR1-08b (59.6) Gate3AG05 Gate3DD05 P03-04 A1650b Gate1BB10 (60.5) see below
61.4 pVNC128b (62.6) pAR01F02 pAR0597 (63.7) Unig22C06
64.9 pAR0278b (65.8) pAR0543
68.7 pAR0157 (68.9) Gate1AB09c (70) A1690 pVNC019 P01-33
74.4 Gate2B-05 (74.5) pAR0219a (76.7) Gafb22M15e Gate1BC02 (77.2) P06-58 pAR0388 Unig23E11
78.1 Unig23D12a (78.2) Gate1BF10 pAR0179c (79.6) Unig23D12b (80.8) Gate4CD08 pAR1003 Unig23A04 A1246
88.1 pAR03F12 pAR04D06 (89.5) Gafb17N07b P06-26b pAR559 Unig06C12 Unig23G09a (90.3) pAR09B07 (90.8) BNL0285 see below
91.4 Coau1M21b G0507 Gate4AG08a (94.2) Gate2CB01
96.7 A1318b pAR0112 pAR0122 Unig28C07a A1751a (98.8) G1066 Gate3CC07c Gate4CD03d
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103 Gate4DB07 pAR0897a BNL0852b (103.1) pAR580 (103.2) G1119 (103.4) A1318a pAR0398b (104.3) BNL3903b pGH239 (104.7) see below
106.1 CMS04 Gate3CC07b PVNC061b Unig23G09b Unig27G09b pAR0335 Gate2AC02b Unig28E09 (107.4) pAR01D02 (107.5) see below
109.8 pAR1-28 PXP1-09 (109.9) Coau2E09 Gate3BF12b (110.1) Gate4AD05b (112.6) BNL1440a pAR0909 PVNC416 A1778 see below
113.7 G1102 Gate4DC08 pAR0050b PVNC016 PVNC047 (116.3) Gate2CH04 pGH736 (116.5) PVNC061a
118 Unig25G02 (119.8) Gate4CD03b pAR03C10 pAR08E12 Unig23F04b
123.4 Unig23B08 Unig26B10 Unig26C03b
126.8 pAR0264b P12-20a C105 (127.6) Unig26H12b (128.4) PXP1-51 (129.2) A1236 M16-101 (129.3) A1838 M16-114 pAR10B09 see below
129.9 M16-150 pAR0125 (130.6) Gate4BA12 (131.8) A1153 (132.4) Gate3DG09 pAR0137
133.1 A1739 (133.7) pARC-07a (134.1) pAR0365 (134.2) A1139 PXP5-21a (134.5) pAR0026a G1219 (134.6) pARC-07b (135.1) see below
136.1 Unig26F11 (138.6) pAR0945b pXP5-21b
139.7 A1351 Gate2DH05b PVNC303 M16-117 (141.1) Gate2CE09 pAR0027 pAR07G08 A1378 BNL3992 G1004 pGH215 see below
142.8 G1195 (143.5) Unig27G01 (143.9) pAR0028a (144.7) Coau2H13 A1701 Gate3AH07
145.9 A1341 (147.3) pAR04B06
149.6 pAR03F05 (150.1) Unig27A04 (150.2) BNL2448 G1025
155.1 M16-118 (157.6) Gate2CF11
160 PXP2-41 (160.8) Gate1AD02b
165 Unig27E06a (165.7) Coau2E04
170.2 A1339 (172.8) Gate2DG09 Coau3C10a
173.1 pAR01A12
176.2 Coau1F14 PVNC052 PVNC060 (176.8) A1546 G1070b Unig27E06b (179) pVNC173b
179.7 Unig26H12d Unig26C11b NBS535 (180.5) Unig25F08 (181) Coau2C01a (182.3) A1238 Gafb17C01a Gate1CD07d see below
184.1 Gate1BF05c (186) pAR0926 (186.6) Unig25D03a (186.7) Gate3CF03 PVNC304 pAR0377 pAR3-37
187.4 Coau4E22 pAR4-48a (187.6) A1429 Coau2M01 Gate3CC12a Gate4DF07a P05-17 pAR0610 pAR0860 pAR0959b (187.8) see below
190.6 pAR0334 (191) Coau4N12b (191.5) pAR0604 (192.4) Unig25D11
193.8 Coau2K12 (194) Coau1A21 R6592A14DL (195.2) Unig22C05b (195.5) A1244 (196.1) A1310b pAR0571d Unig06C08 see below
196.8 pAR03H07 (197) A1751b A1763 (197.4) A1759b (198.3) A1667b pAR09F08 (198.4) G1070c Unig26B06b
199.8 A1214b Gate2CC08b
202.7 Unig23G08 (203) pAR0202a (203.6) pAR0202b (204.8) pAR04B02 (205.1) Coau2I23
206 Unig28B06b (207.2) pGH407 (208.2) Gate2AD01
208.9 Coau1J18 pAR0372 (210.1) A1591a (211.5) Unig25D08d
213.2 pAR3-41 pAR0417 (215.8) Gate4BD11c
226.3 Gafb26N16b
232.3 Unig26D03
237.4 pGH559 (239.2) Gate2CD07b
243.7 pGH248c (244.5) pAR01G05 (245.4) pAR0418b
246.8 pGH588b (249.4) A1619b pAR07D04d
250.9 Coau2A18b pAR01D01 (252.9) pAR01B04 (253) PXP1-11b pAR0995
254.8 pAR09C12 (256.1) pAR03D06
258.6 Gate3DC07 Unig25H05
264.6 A1241 P06-57b pAR0182

(34.2) pAR0060 pAR0160 pAR0169b
(60.5) pAR0527 Unig26C08 Unig22D05 pAR01F05 pAR03B09 pAR0825b pAR0954 pAR1-52
(90.8) BNL1611
(102) pAR0406 (102.1) pGH588a (102.3) pARC-20 (102.4) pGH359 PVNC113 (102.5) M16-002 pAR0940 (102.6) pAR0432 (102.8)
(102.8) Coau2G14 Coau2M17 Gate2CC08a Gate4CE01 P05-61a P06-12 pAR2-42 LGA22
(104.7) A1147a
(107.5) Gate4BE08a
(112.6) P05-14
(129.3) Unig24G01a
(135.1) M16-185 PXP3-03 Unig24G01b (135.6) Gate2AD04 Unig22F05 (135.7) AEST136
(141.1) Unig28A09b (141.9) pAR0234b G1054b (142.3) pGH391
(182.3) pAR0218d pAR3-44 Unig25D08c A1432 pGH777b PXP4-49 Gate4DD06 pAR10C12 pVNC173a Unig25H06
(187.8) pAR0219b (188.2) pAR0966b (188.6) A1455 Unig27H12d Coau1M07b Gate2BF01 M16-125b Unig06G05 A1543a
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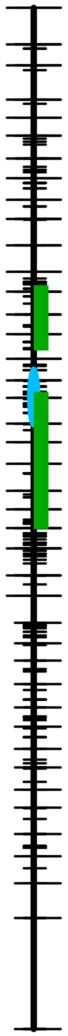
C10 (172.6 cM, 164 Loci)

C11 (170.2 cM, 227 Loci)



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6.1 Gate2BA04 P06-57c (6.8) AEST075 Gate2BH11b
9.6 Gate3BE08 pAR0468 (10.4) A1758
15.3 pVNC024 (16) Unig27B09
18.3 pAR0145c
21.3 pAR04C01 (21.8) Gate1DG04c (22.3) BNL3482 (22.8) Unig25H10b
25.1 Gate2AF06b pGH486 (26.5) A1554 (27) A1619c (27.4) P05-61b
28.4 A1468 (29.2) Unig26D08b Gate2AF06a Gate4CA05 (30.1) Unig28C07b A1158
32 G1272b (33.1) Gate1CD02a pAR0048c
35.2 G1086 (35.3) Unig23B04 Unig26D08a
39.6 Gafb17N07a
44 A1751c Gate1BE03 A1163 pGH295 (45.1) Coau4J15 (45.7) pAR08A01 Gate1CE04b Gate4AG08b Gate4BA10b see below
47.3 A1751d (48.1) BNL0256 BNL1145 (49.3) Gate4DH08b
51.1 Gate1BF03b (52.9) Unig28G09a Unig26E05 (53.1) Gate1AB02 Gate4AG08c
54.4 pAR01D04 (55.7) LXP17b pVNC097b A1286 G1257a A1461 Gate3DD01 pGH214 pGH404 pGH418 (56.7) Coau2G20 (56.9) see below
58.5 pAR10A09 (59.5) Gate4AD08 Unig26B01 Unig28C09 (59.7) pGH857a (60.4) Gate2BF02d Gate2CC04a Gate4AE01b see below
62.1 pAR09E04 PVNC426 (62.2) Unig22F10c (63.1) pAR0145d pAR03D03 pGH484 pGH549d A1548 Gate1DF08a see below
65 pGH700b (65.2) A1212 pGH298 (65.9) Gate3CG03b (66) Unig23E03b (66.3) Gate3CD03 (66.5) Gate4DF12b (67.5) Gate2CD05 see below
69.3 Unig22D06d Gate3BB05c (69.4) Unig25A11 W03 (70.4) A1682
72.4 Gate1CF10
76 pAR0055c pAR08F03 (77.6) Gate4DE09e P05-57 pVNC163 A1131 Gate3CF10 BNL3379 pAR0891 Unig23F01 see below
80.5 Gate4AF01 Unig23D03b (81.1) Gate1AB08b (81.6) Gate2BD01 pVNC106
83.6 Gate3DE06 (85.3) Gate4DC03 (85.7) G1261f pAR0037b P12-28 G1059 (86) Gate4BD12 pGH439
86.7 Gate1DF08b (87.6) Gate1BC10 Gate1CB10b Unig06H02c A1695 Gate4CF10c (88) Gate1AF09 Gate1CE10 (88.1) see below
90.1 pAR0956 (90.5) Gate3DA08 (91) Gate1BH09b PXP4-75 (91.4) PXP1-30 (92) Gate4BC08 (92.6) A1110
94.6 Gate1BC08 Gate1CA06 Gate3BB08 pGH700a PXP4-15 (96.1) Coau2K23
98 pAR09D03
102.5 pAR0827 (102.9) A1183b PXP1-40 (103.1) pAR0675 (103.4) BNL2960 (104) A1631 A1183a (104.6) Coau1C12 (104.9) see below
105.9 Gate2BH02 (106.2) Unig26G09
108.8 A1708 pAR0144f (110.2) A1217 (110.6) G1218
112.7 pAR06E01 (113.7) pAR0457 (115.3) Gate1BH09c Gate1DG09c Coau1F04 G1115a P12-13
116.6 A1235 (118.1) Gate3BD01b (118.3) G1016b (118.7) Gate3BE04b
119.8 pAR04A09a (120.1) pAR04A09b (121.5) pXP4-38a (121.6) pGH597
123.5 Unig22C10 (125.3) PXP4-38b (125.9) A1263
126.6 A1476a pVNC149b (126.8) Coau2I04 (129) Coau2K21
130.3 pAR0264c Unig22D03c
133.3 Gate4AF02 (133.4) Coau2C03 (135.2) G1237
137.7 G1104 Unig23E04 (139.7) Gate2AC08 pAR0572 pAR0709 (140) A1397 G1261h Gate1CG06
141.4 Gafb17C01b Unig23G07a (143.4) PXP1-26
145.9 A1476b P12-19 BNL2553
151.7 Gate1AF04b
170.2 Unig26B02a Unig26B07 pAR06G09

(45.7) Gafb28K14 (45.9) pGH588c (46.1) A1344 (46.8) pBAM250 pGH653b
(56.9) G1257b
(60.4) Gate3BF11 pGH384
(63.1) Gate2DF07 Gate4DH08d pAR0946 pGH270 Unig22B09 (64) Coau3F17a P06-47 (64.4) Coau1C21 Gate3CA08 pAR0055b
(67.5) Gate3CB09c Gate3CG03
(77.6) Unig24E01
(88.1) Gate4DD11 pAR04E05 (88.6) BNL1161 (89.2) G1261g PXP4-66b Unig06E10 (89.5) Unig25A02d
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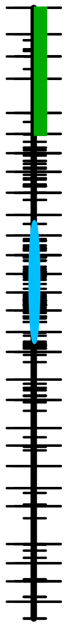
C12 (101.7 cM, 187 Loci)



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4.4 pAR07F11 (5.4) BNL2572 Unig28D06a (6.9) pAR09A08b (7.2) pAR1-06
8.1 Unig28D06b W15 (10.2) Gate1AA05b
11.8 Unig22H10
17.5 AEST023b (19) Unig24C06a
21 Gate1CH03c Gate1DG06b Gate1AG03a (21.1) Unig06D11 (22.3) Gate4BD10a (23.3) pGH374b Gate3DG11 pAR0138 (23.7) see below
24.2 Gate1DG06d Unig22C01c G1058 (24.6) Unig23B03c (25.5) pAR0380 pAR0903 PXP4-58 (26) G1045d (26.6) Gate1AG03b (26.8) see below
27.3 Unig06B07b (27.8) Gate3DE01 (28.4) AEST139b Gate1BG04 (28.6) Gate1DG02 (29.4) Gate1BB01 (29.7) Gate1CA01 see below
30.8 pAR0230a (32) G1193 pAR0230b A1184
34.5 Gate3BE09c (36) Gate3BE01 Gate4CG05b
37.9 Gate3DE03 BNL1061b (38.5) Gate4AH03d (38.8) Unig22D08 Gate4CG05a pAR0043b pAR0986 (39.6) Gate4CA09b see below
41.2 Unig24A07b (41.5) Gate4CA01b BNL1045 pAR4-48b pVNC146b (41.6) Gafb14K15b (42.1) AEST206 pAR0049b see below
44.3 Gafb14A21c Gate3DG05d Unig25D03b (44.4) A1543b Unig26D09 (44.6) Gate4AD10 pAR0711b (44.9) pAR0096b (45.3) see below
47.4 pAR08G12 (47.8) Gate4CA09c (48.1) Coau1J04 (48.4) Gate1CF03 (48.7) Gafb14A21d Gate1AB08c Gate1AB09d see below
50.4 Unig22F03b (50.8) A1438 pAR04H01 (51.4) A1483 G1053 Gate2CE06 A1459 A1535 Unig26B02c (51.7) pAR0206b see below
54 A1159b (54.1) pGH272 pAR10G09 (54.6) Gate4DC12 (55.6) Coau4K03b (55.9) Gate3CC12b (56.1) pAR0858 pVNC218a (56.3) see below
57.3 Coau2C01b (57.8) Gate1BB07 (59) Gafb13B07b
61.9 pAR0333 (62.6) A1618 (63.3) Gate1AB04 pAR0023 (63.7) pAR0643 (64.6) Coau2J14c pAR0977 pARC-14
65.3 Coau3F17b PXP4-26 (65.7) pAR4-22 (67.1) PXP3-60
70 G1261j A1528 (71.5) Gate1CB02
72.9 Gate1AH05 (73.1) pAR08D12 (73.7) Gate4AA09c
76.3 Unig22F03a
80 Unig22C05c (80.8) A1183c (82.7) Gate2BF02e
83 Coau1M05b (85) Gate3DB06
89.3 PXP3-07 (89.4) PVNC311 (90.4) Unig23F12 (91.6) pBAM291c
92.5 Unig23G12c (95.2) Gate3DD07 A1662
95.5 Gate4CG07 (98.1) pAR0351 Gate4DC01b
98.9 Gate4CE05b (101.7) Gate3BD03 Gate1CB01

(23.7) G1261i
(26.8) Gate2BF04
(29.7) Gate3BA08 BNL3433 Gate1BA05a BNL3955b
(39.6) pAR0450b (40) Unig27A11a Unig27B06a (40.1) Coau2I05b (40.4) Gate4AE08b pVNC058
(42.1) pGH857b A1172 (43.1) G1033 (43.5) P05-32c (43.9) Unig27B06b Unig28C06 Unig28H09
(45.3) pAR0939c (46) P11-38 (46.8) pAR04E02b
(48.7) Gate1AF04c Gate4AD05c A1638 Gate4AE10 pAR08H07 (48.9) PXP1-77b (49.1) A1254 A1159c (49.4) pAR06E04
(49.4) Coau1E03 pAR0131 A1159a (49.5) ESTS178 Gate1CH01b (49.6) pAR0078b Unig26B02b A1619d BNL1673 (50) Unig25D10
(51.7) Unig23G07b (52.3) Gate4DF07b pAR0042 pAR0206c pAR0144g
(56.3) Gate4AA07 P05-02 Unig25E12 (56.7) Gate1CH01a Gate2BG01 Gate4BA04

C13 (198.1 cM, 242 Loci)

(11.3) G1115b Gafb23B18 pAR0601 Gate3AH03b
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(56.2) pAR0274 Unig22A02
(87.6) PXP1-11c Coau2A19 Coau2K17b Gate3CC08 Gate4BE04 pAR0958 pAR4-39 PXP1-69 PXP2-25 pVNC256 G1125
(97.7) pAR0049c
(179.4) pAR0898 (180) pAR04B07 pGH544 pAR0923 (180.5) pAR0924