

Supplementary Table S1. Characteristics of BAC clones used for the chromosome painting of Bd1.

| Bd1 short arm | | | | |
|----------------------|-----------------|-------------------|-----------------|---------------------------|
| No. | Clone ID | Start [bp] | End [bp] | Repeat content [%] |
| 1 | a0035K02 | 147863 | 304506 | 18.31 |
| 2 | b0027N17 | 560624 | 710332 | 6.56 |
| 3 | a0037D23 | 1171403 | 1328435 | 13.07 |
| 4 | a0012F06 | 1537097 | 1734409 | 7.59 |
| 5 | a0032E05 | 1907231 | 2063694 | 11.83 |
| 6 | a0008O14 | 2635548 | 2801693 | 8.30 |
| 7 | a0021B03 | 3028832 | 3173186 | 6.23 |
| 8 | a0004B12 | 3276891 | 3460444 | 5.68 |
| 9 | b0044D24 | 3878248 | 4004060 | 13.91 |
| 10 | b0003A11 | 4404030 | 4546882 | 30.82 |
| 11 | a0032K13 | 5048843 | 5206517 | 26.89 |
| 12 | a0017K22 | 5375697 | 5509098 | 17.71 |
| 13 | b0037O18 | 6122656 | 6272292 | 19.17 |
| 14 | a0022C04 | 6574012 | 6741405 | 30.61 |
| 15 | b0040G07 | 7221475 | 7389553 | 30.09 |
| 16 | b0013P15 | 7656602 | 7805960 | 29.21 |
| 17 | a0013O16 | 7926543 | 8055682 | 39.20 |
| 18 | b0030L10 | 8680898 | 8845282 | 10.03 |
| 19 | b0012L20 | 8850673 | 9007358 | 14.08 |
| 20 | a0015H06 | 9424591 | 9569999 | 14.80 |
| 21 | a0007G23 | 9965773 | 10101237 | 15.91 |
| 22 | a0032D10 | 10490542 | 10652198 | 11.18 |
| 23 | a0003J21 | 10927667 | 11073109 | 16.93 |
| 24 | a0023P13 | 11505702 | 11632287 | 22.48 |
| 25 | a0032F08 | 12115980 | 12241228 | 17.12 |
| 26 | a0024M10 | 12444261 | 12575731 | 23.81 |
| 27 | a0027D04 | 12706461 | 12847057 | 22.87 |
| 28 | b0019G20 | 13362834 | 13517753 | 21.02 |
| 29 | b0023C02 | 13999817 | 14137163 | 13.45 |
| 30 | b0001G04 | 14561692 | 14709543 | 15.53 |

| Bd1 short arm | | | | |
|----------------------|-----------------|-------------------|-----------------|---------------------------|
| No. | Clone ID | Start [bp] | End [bp] | Repeat content [%] |
| 31 | a0020A04 | 15092918 | 15238493 | 0.00 |
| 32 | b0023O18 | 15449374 | 15577903 | 0.00 |
| 33 | a0003N21 | 16107590 | 16251236 | 10.80 |
| 34 | a0002N01 | 16344468 | 16496573 | 11.12 |
| 35 | a0009N18 | 17150298 | 17335777 | 0.00 |
| 36 | a0014L23 | 17404191 | 17543242 | 7.86 |
| 37 | b0018P22 | 18190466 | 18326563 | 23.15 |
| 38 | a0017E13 | 18574112 | 18708723 | 0.00 |
| 39 | a0010I03 | 19198770 | 19342731 | 7.06 |
| 40 | a0007L04 | 19364297 | 19511432 | 8.67 |
| 41 | b0002O16 | 20013520 | 20160236 | 0.00 |
| 42 | a0024N14 | 20488400 | 20631457 | 19.18 |
| 43 | a0027K03 | 21168673 | 21307307 | 0.00 |
| 44 | a0010K04 | 21496092 | 21643627 | 19.83 |
| 45 | a0011I01 | 21907910 | 22040598 | 0.00 |
| 46 | a0018B03 | 22412015 | 22565632 | 32.71 |
| 47 | b0022H13 | 23114454 | 23242441 | 0.00 |
| 48 | a0023E14 | 23230575 | 23392276 | 21.52 |
| 49 | a0043B06 | 24028749 | 24191469 | 22.76 |
| 50 | a0042C21 | 24228323 | 24375228 | 16.48 |
| 51 | a0026E19 | 25017625 | 25161139 | 14.31 |
| 52 | a0046B12 | 25556278 | 25718695 | 17.60 |
| 53 | a0018O15 | 25727688 | 25878318 | 13.18 |
| 54 | b0028A06 | 26442023 | 26591576 | 16.02 |
| 55 | b0002C04 | 27060765 | 27214938 | 27.84 |
| 56 | a0006K13 | 27522409 | 27682274 | 23.09 |
| 57 | a0044I06 | 28135872 | 28292480 | 21.81 |
| 58 | a0043P17 | 28526824 | 28683718 | 21.98 |
| 59 | a0029A09 | 28940084 | 29079192 | 22.18 |
| 60 | a0032C01 | 29475135 | 29677346 | 31.42 |
| 61 | a0002G12 | 30075959 | 30187436 | 25.08 |
| 62 | a0007B20 | 30824142 | 30835981 | 8.00 |
| 63 | a0036J15 | 31222238 | 31387974 | 13.86 |
| 64 | a0037D16 | 31313973 | 31498115 | 24.11 |
| 65 | a0018G20 | 32094917 | 32274028 | 12.54 |
| 66 | b0024I19 | 32507293 | 32633286 | 0.00 |
| 67 | b0014O02 | 33010624 | 33123772 | 0.00 |
| 68 | a0024G16 | 33587038 | 33745554 | 0.00 |
| 69 | b0037O03 | 33832455 | 34023561 | 20.87 |
| 70 | a0004L01 | 34316249 | 34466638 | 15.53 |

| Bd1 long arm | | | | |
|---------------------|-----------------|-------------------|-----------------|---------------------------|
| No. | Clone ID | Start [bp] | End [bp] | Repeat content [%] |
| 1 | b0011C11 | 38625084 | 38768816 | 25.98 |
| 2 | a0002G19 | 39219901 | 39352626 | 20.11 |
| 3 | a0030K01 | 39352642 | 39424325 | 13.60 |
| 4 | a0002I22 | 39952805 | 40102980 | 19.01 |
| 5 | b0023K21 | 40363127 | 40508554 | 24.17 |
| 6 | a0003G01 | 41070484 | 41199669 | 5.68 |
| 7 | a0017I18 | 41400831 | 41536057 | 10.35 |
| 8 | a0006H08 | 42291978 | 42445395 | 30.82 |
| 9 | a0034B17 | 42516220 | 42665540 | 26.89 |
| 10 | a0022M24 | 43211660 | 43355407 | 17.71 |
| 11 | b0004P09 | 43536825 | 43670757 | 0.00 |
| 12 | b0003O14 | 43968448 | 44100412 | 0.00 |
| 13 | a0046B04 | 44701450 | 44835069 | 28.04 |
| 14 | a0009H21 | 45130478 | 45275483 | 30.09 |
| 15 | b0019N18 | 45624834 | 45763826 | 29.21 |
| 16 | b0039A23 | 45904934 | 46085862 | 34.61 |
| 17 | b0025P22 | 46564769 | 46692954 | 10.03 |
| 18 | a0045K11 | 47017729 | 47159607 | 14.08 |
| 19 | a0018I01 | 47327837 | 47472575 | 14.80 |
| 20 | a0018A03 | 48153393 | 48351371 | 12.13 |
| 21 | b0044L08 | 48612347 | 48783561 | 9.01 |
| 22 | a0016L07 | 49131764 | 49282548 | 17.24 |
| 23 | b0042L08 | 49567141 | 49756854 | 22.48 |
| 24 | a0003G14 | 50139085 | 50274374 | 17.12 |
| 25 | a0007A17 | 50488742 | 50629310 | 23.81 |
| 26 | a0002G03 | 50987420 | 51131768 | 21.02 |
| 27 | a0002M19 | 51404954 | 51599184 | 13.45 |
| 28 | b0035K24 | 51720482 | 51914140 | 15.53 |
| 29 | a0046C24 | 52577876 | 52717406 | 12.29 |
| 30 | a0020C13 | 52998818 | 53110321 | 14.83 |
| 31 | a0011F10 | 53395079 | 53532078 | 10.55 |
| 32 | a0046G17 | 54082210 | 54253048 | 0.00 |
| 33 | b0047M09 | 54775761 | 54934862 | 11.12 |
| 34 | b0036M23 | 55099293 | 55274619 | 14.70 |
| 35 | a0011D03 | 55361479 | 55401129 | 7.86 |
| 36 | b0044C20 | 56154348 | 56285508 | 16.71 |
| 37 | b0013C18 | 56402015 | 56523891 | 0.00 |
| 38 | b0028P17 | 57093738 | 57225377 | 0.00 |
| 39 | a0022N20 | 57208701 | 57348499 | 11.96 |
| 40 | a0019B04 | 58011832 | 58155264 | 19.18 |

| Bd1 long arm | | | | |
|---------------------|-----------------|-------------------|-----------------|---------------------------|
| No. | Clone ID | Start [bp] | End [bp] | Repeat content [%] |
| 41 | b0003K21 | 58350464 | 58480351 | 15.82 |
| 42 | a0010A14 | 59503419 | 59676696 | 0.00 |
| 43 | a0008E12 | 60079495 | 60251020 | 17.16 |
| 44 | a0005H16 | 60258365 | 60413281 | 0.00 |
| 45 | b0037A14 | 61095306 | 61288697 | 19.17 |
| 46 | a0012H18 | 61475648 | 61619144 | 0.00 |
| 47 | b0003A21 | 61920716 | 62077069 | 0.00 |
| 48 | a0034M17 | 62501248 | 62642447 | 0.00 |
| 49 | a0045D19 | 63062019 | 63221983 | 14.31 |
| 50 | b0022G04 | 63557791 | 63711230 | 17.60 |
| 51 | a0013D23 | 64120769 | 64297730 | 16.02 |
| 52 | b0011I02 | 64559074 | 64702171 | 27.84 |
| 53 | a0003I14 | 65067565 | 65202176 | 23.09 |
| 54 | a0046P14 | 65376014 | 65522455 | 21.81 |
| 55 | a0009I15 | 65946210 | 66098108 | 21.98 |
| 56 | b0026H13 | 66197674 | 66346594 | 22.18 |
| 57 | b0030D22 | 67065313 | 67205367 | 25.08 |
| 58 | a0019B19 | 67392232 | 67529032 | 8.00 |
| 59 | b0003K24 | 67945518 | 68072820 | 13.86 |
| 60 | a0011O07 | 68533765 | 68686250 | 24.11 |
| 61 | a0043A05 | 68898017 | 69053532 | 12.54 |
| 62 | b0004O01 | 69023274 | 69164463 | 23.47 |
| 63 | b0039M08 | 69966292 | 70146601 | 29.34 |
| 64 | a0040G14 | 70435911 | 70578835 | 17.94 |
| 65 | b0017K19 | 71146553 | 71281318 | 0.00 |
| 66 | a0021F18 | 71455475 | 71597258 | 0.00 |
| 67 | a0041A08 | 72027767 | 72181888 | 6.97 |
| 68 | b0002N07 | 72465040 | 72619352 | 4.45 |
| 69 | a0005K09 | 72948475 | 73083942 | 4.87 |
| 70 | b0039K17 | 73601518 | 73740071 | 5.12 |
| 71 | a0033F06 | 74020535 | 74180685 | 4.77 |
| 72 | b0035K23 | 74475472 | 74659792 | 12.79 |

Supplementary Table S2. Characteristics of BAC clones used for the chromosome painting of Bd2.

| Bd2 short arm | | | | |
|----------------------|-----------------|-------------------|-----------------|---------------------------|
| No. | Clone ID | Start [bp] | End [bp] | Repeat content [%] |
| 1 | a0038A01 | 1022 | 132144 | 4.73 |
| 2 | a0026H23 | 501743 | 631176 | 5.15 |
| 3 | b0039C09 | 1311448 | 1507438 | 6.21 |
| 4 | a0027K15 | 1864643 | 2004976 | 4.27 |
| 5 | b0035C01 | 2500100 | 2659222 | 4.28 |
| 6 | b0002F19 | 2858161 | 3010741 | 5.64 |
| 7 | a0028O04 | 3492740 | 3587755 | 10.20 |
| 8 | b0048M15 | 3999943 | 4170302 | 18.58 |
| 9 | a0002P22 | 4319740 | 4509765 | 7.60 |
| 10 | a0045F24 | 6004397 | 6146555 | 12.87 |
| 11 | a0047M10 | 7007047 | 7144308 | 8.94 |
| 12 | a0019E04 | 8843922 | 9006117 | 13.80 |
| 13 | a0012B07 | 9006125 | 9148678 | 6.31 |
| 14 | a0005E09 | 10380990 | 10507985 | 10.31 |
| 15 | b0048L18 | 12984227 | 13000547 | 8.85 |
| 16 | a0044D02 | 14006553 | 14195269 | 11.10 |
| 17 | a0017D02 | 15866689 | 16021967 | 17.90 |
| 18 | a0031J04 | 16021976 | 16162135 | 12.06 |
| 19 | a0047D12 | 17856422 | 17996794 | 27.25 |
| 20 | a0021H13 | 18176419 | 18323680 | 28.06 |
| 21 | a0026K14 | 19861012 | 20005795 | 15.73 |
| 22 | a0043C22 | 20005803 | 20143867 | 25.91 |
| 23 | b0006D07 | 20880418 | 21008785 | 17.52 |
| 24 | b0015N23 | 21980992 | 22118800 | 12.71 |
| 25 | b0038L02 | 22509927 | 22639901 | 23.44 |
| 26 | b0011O19 | 25393226 | 25510444 | 14.12 |

| Bd2 long arm | | | | |
|---------------------|-----------------|-------------------|-----------------|---------------------------|
| No. | Clone ID | Start [bp] | End [bp] | Repeat content [%] |
| 1 | b0031J17 | 33543920 | 33664342 | 15.14 |
| 2 | a0014K11 | 34309867 | 34503922 | 8.53 |
| 3 | b0003D21 | 35507055 | 35522066 | 19.01 |
| 4 | b0007E06 | 36376507 | 36505573 | 18.82 |
| 5 | b0022I07 | 38509106 | 38646001 | 9.09 |
| 6 | a0024L09 | 38997728 | 39192842 | 8.39 |
| 7 | b0031K20 | 39779799 | 39931474 | 5.43 |
| 8 | b0016E24 | 39997753 | 40003453 | 1.65 |
| 9 | a0043N06 | 41508421 | 41714064 | 18.78 |
| 10 | a0008H07 | 42500887 | 42664133 | 14.08 |
| 11 | b0018H13 | 42943153 | 43001509 | 9.64 |
| 12 | a0029H05 | 43505258 | 43648404 | 13.83 |
| 13 | a0009N24 | 44005924 | 44173470 | 13.71 |
| 14 | b0041G17 | 44876290 | 45007631 | 13.75 |
| 15 | b0031I09 | 46500135 | 46639653 | 7.51 |
| 16 | b0040K17 | 47000159 | 47021312 | 4.78 |
| 17 | b0019P09 | 48369110 | 48504229 | 3.43 |
| 18 | b0041J21 | 49505774 | 49706051 | 9.11 |
| 19 | b0038L04 | 50005019 | 50143082 | 5.40 |
| 20 | b0012J01 | 51003290 | 51006240 | 0.00 |
| 21 | a0031O24 | 52001822 | 52162247 | 4.16 |
| 22 | a0036P06 | 52875522 | 53003468 | 5.61 |
| 23 | a0027O24 | 53007896 | 53168487 | 8.87 |
| 24 | b0040O17 | 53370233 | 53504052 | 4.56 |
| 25 | b0036G07 | 53816466 | 54010118 | 3.84 |
| 26 | b0027N08 | 54420021 | 54540398 | 9.29 |
| 27 | b0047O03 | 55698147 | 55846468 | 5.48 |
| 28 | a0038M22 | 56336703 | 56502216 | 4.16 |
| 29 | a0038G14 | 57002804 | 57148130 | 7.24 |

Supplementary Table S3. Characteristics of BAC clones used for the chromosome painting of Bd3.

| Bd3 short arm | | | | |
|----------------------|-----------------|-------------------|-----------------|---------------------------|
| No. | Clone ID | Start [bp] | End [bp] | Repeat content [%] |
| 1 | a0019P17 | 353866 | 501536 | 12.96 |
| 2 | a0001O14 | 501589 | 646912 | 10.33 |
| 3 | b0028O16 | 856255 | 1007650 | 12.86 |
| 4 | a0005B05 | 1000513 | 1146984 | 5.57 |
| 5 | a0011O22 | 1330674 | 1507458 | 7.88 |
| 6 | a0024P19 | 1507465 | 1643914 | 14.28 |
| 7 | b0026H03 | 1872780 | 2007217 | 6.12 |
| 8 | b0040M13 | 2318183 | 2506944 | 9.33 |
| 9 | b0022F20 | 2505550 | 2655293 | 9.03 |
| 10 | a0015A18 | 4001904 | 4157452 | 8.62 |
| 11 | a0007G18 | 4853075 | 4999533 | 15.21 |
| 12 | b0041N16 | 5017958 | 5207531 | 12.89 |
| 13 | a0001N07 | 6854023 | 7004002 | 7.62 |
| 14 | a0029A17 | 7006740 | 7159041 | 6.88 |
| 15 | b0038O09 | 8001902 | 8135334 | 16.54 |
| 16 | b0016A22 | 11505050 | 11712720 | 21.97 |
| 17 | b0010J18 | 13993335 | 14131952 | 16.02 |
| 18 | a0014K09 | 14869360 | 15008860 | 15.03 |
| 19 | b0041F02 | 15002696 | 15181874 | 5.37 |
| 20 | a0022G01 | 16038657 | 16055486 | 5.49 |
| 21 | a0017B02 | 19002671 | 19154844 | 11.10 |
| 22 | b0009N11 | 19496003 | 19508052 | 2.37 |
| 23 | a0026C10 | 19503371 | 19692680 | 16.69 |
| 24 | a0019E11 | 19840599 | 19994588 | 21.87 |
| 25 | b0014A01 | 20363699 | 20508591 | 19.13 |
| 26 | a0033D16 | 22106200 | 22299788 | 16.81 |

| Bd3 long arm | | | | |
|---------------------|-----------------|-------------------|-----------------|---------------------------|
| No. | Clone ID | Start [bp] | End [bp] | Repeat content [%] |
| 1 | b0002I18 | 29506741 | 29629956 | 11.75 |
| 2 | a0036L01 | 31849467 | 32007174 | 15.96 |
| 3 | b0007K04 | 34625943 | 34771746 | 18.56 |
| 4 | b0032D13 | 36350054 | 36506048 | 18.24 |
| 5 | b0011M04 | 36854229 | 37002472 | 5.83 |
| 6 | b0025H02 | 37377041 | 37501983 | 7.77 |
| 7 | b0035D02 | 37506114 | 37762639 | 19.54 |
| 8 | b0047N08 | 40007444 | 40153099 | 19.42 |
| 9 | a0047F20 | 40911246 | 41000063 | 9.54 |
| 10 | b0036D03 | 41006469 | 41221676 | 17.42 |
| 11 | b0015F15 | 41505264 | 41681278 | 7.27 |
| 12 | a0013E06 | 42292206 | 42500698 | 12.33 |
| 13 | a0033K23 | 42848637 | 43004766 | 13.13 |
| 14 | a0043C19 | 43854818 | 44001044 | 17.15 |
| 15 | a0038N13 | 44001051 | 44142538 | 18.64 |
| 16 | a0005G11 | 47463732 | 47500906 | 8.93 |
| 17 | a0043A16 | 48007234 | 48184206 | 19.18 |
| 18 | a0026K12 | 48876166 | 49007415 | 8.82 |
| 19 | a0026M18 | 49347850 | 49503810 | 4.84 |
| 20 | a0018C17 | 49869712 | 50007626 | 7.58 |
| 21 | a0019B17 | 50354409 | 50508627 | 7.22 |
| 22 | a0025I07 | 50508637 | 50670776 | 9.56 |
| 23 | a0037F15 | 50854746 | 51004145 | 4.69 |
| 24 | a0018O04 | 52001207 | 52171186 | 16.46 |
| 25 | a0023N06 | 52300422 | 52503409 | 11.71 |
| 26 | a0037C10 | 52501229 | 52687354 | 9.66 |
| 27 | a0024K02 | 53356232 | 53501555 | 12.47 |
| 28 | a0030K10 | 54003049 | 54158281 | 4.71 |
| 29 | a0028B03 | 54337885 | 54500593 | 16.02 |
| 30 | a0002F20 | 54500603 | 54637896 | 3.09 |
| 31 | a0008G22 | 55503533 | 55665230 | 5.31 |
| 32 | a0043F22 | 56008431 | 56171010 | 19.64 |
| 33 | a0044B21 | 56862681 | 57005129 | 9.17 |
| 34 | b0034A10 | 57009259 | 57107717 | 7.19 |
| 35 | b0037C16 | 57302467 | 57322111 | 1.45 |
| 36 | a0008L06 | 57499776 | 57533242 | 7.41 |
| 37 | a0020N10 | 57504387 | 57653389 | 5.12 |

Supplementary Table S4. Characteristics of BAC clones used for the chromosome painting of Bd4.

| Bd4 short arm | | | | |
|----------------------|-----------------|-------------------|-----------------|---------------------------|
| No. | Clone ID | Start [bp] | End [bp] | Repeat content [%] |
| 1 | b0022F16 | 1375208 | 1513070 | 17.05 |
| 2 | a0029D03 | 1509327 | 1527857 | 14.80 |
| 3 | b0011J07 | 1877049 | 2006504 | 13.50 |
| 4 | b0030B12 | 2007584 | 2157984 | 7.19 |
| 5 | a0008M09 | 3005577 | 3057490 | 10.02 |
| 6 | b0031P08 | 4003479 | 4005284 | 0.00 |
| 7 | b0020L19 | 4509871 | 4652127 | 17.87 |
| 8 | b0015K04 | 5000667 | 5192928 | 12.52 |
| 9 | b0015K04 | 5192351 | 5334608 | 20.17 |
| 10 | a0021K11 | 5356098 | 5506730 | 12.85 |
| 11 | b0040J03 | 7830905 | 8001843 | 19.13 |
| 12 | b0021B09 | 9502901 | 9667864 | 12.35 |
| 13 | a0039N16 | 9858184 | 10002657 | 14.32 |
| 14 | a0043D11 | 11006774 | 11150531 | 22.28 |
| 15 | a0038M23 | 13356537 | 13506604 | 23.57 |
| 16 | a0004L13 | 13506625 | 13718798 | 11.46 |
| 17 | a0010I18 | 14002249 | 14164264 | 10.04 |
| 18 | a0028M13 | 14467770 | 14501426 | 10.11 |
| 19 | a0006A19 | 15500025 | 15633790 | 10.64 |
| 20 | b0023J07 | 18378813 | 18509732 | 28.56 |

| Bd4 long arm | | | | |
|---------------------|-----------------|-------------------|-----------------|---------------------------|
| No. | Clone ID | Start [bp] | End [bp] | Repeat content [%] |
| 1 | a0047K04 | 27639991 | 27795427 | 18.44 |
| 2 | b0012C05 | 28999425 | 29071930 | 12.74 |
| 3 | a0006J17 | 29358544 | 29516826 | 9.42 |
| 4 | b0027J13 | 30855184 | 31004161 | 28.40 |
| 5 | a0013N14 | 31000455 | 31132079 | 9.47 |
| 6 | a0020D08 | 32504625 | 32642850 | 8.94 |
| 7 | b0033J04 | 32835278 | 33001029 | 24.02 |
| 8 | a0029H13 | 33008088 | 33024284 | 20.44 |
| 9 | b0005K02 | 33865813 | 34006488 | 20.04 |
| 10 | b0002F10 | 34027870 | 34141505 | 10.19 |

| Bd4 long arm | | | | |
|---------------------|-----------------|-------------------|-----------------|---------------------------|
| No. | Clone ID | Start [bp] | End [bp] | Repeat content [%] |
| 11 | a0021F10 | 35000545 | 35176627 | 26.57 |
| 12 | a0011F18 | 36857616 | 37009036 | 26.55 |
| 13 | a0031C04 | 37506966 | 37653676 | 24.29 |
| 14 | a0004J07 | 38767257 | 38918272 | 6.73 |
| 15 | b0021H03 | 38925520 | 39066237 | 14.28 |
| 16 | b0035E05 | 39350118 | 39526113 | 6.40 |
| 17 | b0014B09 | 39506174 | 39642910 | 17.79 |
| 18 | a0024O22 | 39853958 | 40006315 | 16.05 |
| 19 | b0041J05 | 40005710 | 40200691 | 17.39 |
| 20 | a0032J21 | 40499878 | 40546546 | 5.53 |
| 21 | a0003H15 | 40835257 | 41003446 | 12.86 |
| 22 | b0047A04 | 41006415 | 41014781 | 22.45 |
| 23 | a0047P14 | 41364258 | 41502074 | 13.90 |
| 24 | a0026J09 | 41502088 | 41633709 | 24.33 |
| 25 | b0032E02 | 41852352 | 42005820 | 21.66 |
| 26 | b0026E20 | 42346424 | 42505268 | 15.02 |
| 27 | b0038H23 | 42789149 | 43003220 | 6.17 |
| 28 | b0023G20 | 43352742 | 43500050 | 9.76 |
| 29 | b0019I11 | 43876622 | 44010479 | 6.16 |
| 30 | a0004A24 | 44343043 | 44510220 | 7.93 |
| 31 | a0043N14 | 45504848 | 45661980 | 6.49 |
| 32 | b0043F05 | 46001501 | 46132046 | 15.43 |
| 33 | a0030C04 | 46357221 | 46502222 | 7.16 |
| 34 | a0004O19 | 46502230 | 46658753 | 9.01 |
| 35 | b0031I03 | 46846042 | 47008130 | 20.21 |
| 36 | b0026N15 | 47003712 | 47134381 | 8.51 |
| 37 | a0017H17 | 47506772 | 47643218 | 6.97 |
| 38 | a0024E12 | 48004859 | 48154124 | 3.07 |
| 39 | a0041I03 | 48350055 | 48507632 | 9.05 |

Supplementary Table S5. Characteristics of BAC clones used for the chromosome painting of Bd5.

| Bd5 short arm | | | | |
|----------------------|-----------------|-------------------|-----------------|---------------------------|
| No. | Clone ID | Start [bp] | End [bp] | Repeat content [%] |
| 1 | a0018K07 | 853205 | 1009526 | 16.20 |
| 2 | a0019O20 | 1091367 | 1236179 | 16.00 |
| 3 | b0041L07 | 2001626 | 2206122 | 23.87 |
| 4 | b0010D07 | 2501377 | 2672539 | 21.99 |

| Bd5 long arm | | | | |
|---------------------|-----------------|-------------------|-----------------|---------------------------|
| No. | Clone ID | Start [bp] | End [bp] | Repeat content [%] |
| 1 | a0045F23 | 13499779 | 13653343 | 18.89 |
| 2 | b0030K21 | 15304885 | 15505515 | 22.56 |
| 3 | a0026M04 | 17499731 | 17633162 | 23.72 |
| 4 | a0023L21 | 17634500 | 17679830 | 4.89 |
| 5 | a0001F13 | 17802975 | 18003203 | 23.52 |
| 6 | a0017D24 | 18003221 | 18155770 | 16.96 |
| 7 | b0042J14 | 18312982 | 18503857 | 19.62 |
| 8 | a0046O09 | 20358624 | 20503060 | 24.99 |
| 9 | b0024J19 | 20845837 | 21003148 | 11.02 |
| 10 | b0033K07 | 21003184 | 21110356 | 11.5 |
| 11 | b0037B05 | 21507488 | 21710347 | 23.77 |
| 12 | b0016H11 | 21877774 | 22006306 | 16.69 |
| 13 | b0041K21 | 23480858 | 23500119 | 1.39 |
| 14 | b0032J06 | 23870997 | 24003288 | 6.19 |
| 15 | a0045J11 | 24003128 | 24154997 | 9.3 |
| 16 | a0026B16 | 24841254 | 25002060 | 5.96 |
| 17 | a0031B15 | 25503136 | 25695070 | 4.94 |
| 18 | a0023B07 | 25746075 | 25906029 | 8.99 |
| 19 | a0019J13 | 25906054 | 26098440 | 3.35 |