

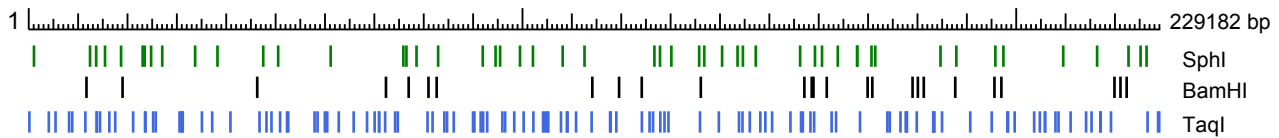
Supplement

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Figure S1 and Table S1: Restriction map of *PBX1* intron 2 and list of restriction sites



| # | Site | Enzyme | # | Site | Enzyme | # | Site | Enzyme | # | Site | Enzyme |
|----|-------------|--------|----|---------------|--------|-----|---------------|--------|-----|---------------|--------|
| 1 | 128/130 | TaqI | 50 | 61156/61152 | SphI | 99 | 114144/114148 | BamHI | 148 | 170689/170685 | SphI |
| 2 | 1058/1054 | SphI | 51 | 62794/62796 | TaqI | 100 | 117749/117751 | TaqI | 149 | 170853/170857 | BamHI |
| 3 | 4066/4068 | TaqI | 52 | 65808/65810 | TaqI | 101 | 117865/117867 | TaqI | 150 | 171452/171448 | SphI |
| 4 | 5427/5429 | TaqI | 53 | 68518/68520 | TaqI | 102 | 119004/119006 | TaqI | 151 | 173901/173903 | TaqI |
| 5 | 8174/8176 | TaqI | 54 | 70057/70059 | TaqI | 103 | 119564/119568 | BamHI | 152 | 174386/174388 | TaqI |
| 6 | 8814/8816 | TaqI | 55 | 70958/70960 | TaqI | 104 | 124161/124165 | BamHI | 153 | 176559/176561 | TaqI |
| 7 | 11467/11469 | TaqI | 56 | 70965/70967 | TaqI | 105 | 124184/124186 | TaqI | 154 | 177615/177617 | TaqI |
| 8 | 11693/11697 | BamHI | 57 | 72184/72186 | TaqI | 106 | 125742/125744 | TaqI | 155 | 177796/177798 | TaqI |
| 9 | 12415/12411 | SphI | 58 | 72355/72359 | BamHI | 107 | 126441/126443 | TaqI | 156 | 177864/177866 | TaqI |
| 10 | 13655/13651 | SphI | 59 | 74204/74206 | TaqI | 108 | 126726/126722 | SphI | 157 | 179006/179010 | BamHI |
| 11 | 13772/13774 | TaqI | 60 | 74745/74747 | TaqI | 109 | 127851/127847 | SphI | 158 | 179855/179857 | TaqI |
| 12 | 13783/13785 | TaqI | 61 | 75874/75870 | SphI | 110 | 127921/127923 | TaqI | 159 | 180083/180087 | BamHI |
| 13 | 14440/14442 | TaqI | 62 | 76499/76495 | SphI | 111 | 128767/128769 | TaqI | 160 | 181280/181284 | BamHI |
| 14 | 15449/15445 | SphI | 63 | 76954/76958 | BamHI | 112 | 129567/129569 | TaqI | 161 | 183189/183191 | TaqI |
| 15 | 16321/16323 | TaqI | 64 | 78535/78531 | SphI | 113 | 130158/130154 | SphI | 162 | 183284/183286 | TaqI |
| 16 | 17518/17520 | TaqI | 65 | 80769/80771 | TaqI | 114 | 135784/135780 | SphI | 163 | 183317/183319 | TaqI |
| 17 | 18703/18699 | SphI | 66 | 80967/80971 | BamHI | 115 | 135955/135957 | TaqI | 164 | 183418/183420 | TaqI |
| 18 | 19002/19006 | BamHI | 67 | 81792/81794 | TaqI | 116 | 136120/136124 | BamHI | 165 | 184666/184662 | SphI |
| 19 | 21143/21145 | TaqI | 68 | 82617/82621 | BamHI | 117 | 136819/136815 | SphI | 166 | 184976/184978 | TaqI |
| 20 | 23068/23064 | SphI | 69 | 82914/82910 | SphI | 118 | 139769/139771 | TaqI | 167 | 187877/187873 | SphI |
| 21 | 23478/23474 | SphI | 70 | 84173/84175 | TaqI | 119 | 140431/140427 | SphI | 168 | 190690/190692 | TaqI |
| 22 | 23551/23553 | TaqI | 71 | 84724/84726 | TaqI | 120 | 143561/143557 | SphI | 169 | 195039/195041 | TaqI |
| 23 | 23659/23661 | TaqI | 72 | 86080/86082 | TaqI | 121 | 143855/143857 | TaqI | 170 | 195776/195772 | SphI |
| 24 | 24783/24779 | SphI | 73 | 89982/89984 | TaqI | 122 | 144562/144564 | TaqI | 171 | 197404/197400 | SphI |
| 25 | 25194/25196 | TaqI | 74 | 90258/90260 | TaqI | 123 | 144646/144642 | SphI | 172 | 198201/198203 | TaqI |
| 26 | 25724/25726 | TaqI | 75 | 91526/91528 | TaqI | 124 | 146037/146039 | TaqI | 173 | 198352/198354 | TaqI |
| 27 | 27041/27037 | SphI | 76 | 91950/91946 | SphI | 125 | 147248/147244 | SphI | 174 | 199688/199690 | TaqI |
| 28 | 30547/30549 | TaqI | 77 | 92028/92030 | TaqI | 126 | 148172/148174 | TaqI | 175 | 203637/203639 | TaqI |
| 29 | 31021/31023 | TaqI | 78 | 92852/92854 | TaqI | 127 | 149190/149192 | TaqI | 176 | 204782/204784 | TaqI |
| 30 | 31031/31033 | TaqI | 79 | 94546/94542 | SphI | 128 | 150566/150568 | TaqI | 177 | 205808/205810 | TaqI |
| 31 | 31190/31192 | TaqI | 80 | 95471/95467 | SphI | 129 | 154272/154274 | TaqI | 178 | 205868/205870 | TaqI |
| 32 | 33698/33694 | SphI | 81 | 95928/95930 | TaqI | 130 | 156237/156233 | SphI | 179 | 207954/207956 | TaqI |
| 33 | 35075/35077 | TaqI | 82 | 96493/96495 | TaqI | 131 | 156416/156418 | TaqI | 180 | 208571/208573 | TaqI |
| 34 | 37156/37158 | TaqI | 83 | 98334/98336 | TaqI | 132 | 156779/156781 | TaqI | 181 | 209518/209514 | SphI |
| 35 | 38227/38223 | SphI | 84 | 99501/99497 | SphI | 133 | 157093/157097 | BamHI | 182 | 211018/211020 | TaqI |
| 36 | 40848/40850 | TaqI | 85 | 100237/100239 | TaqI | 134 | 158327/158329 | TaqI | 183 | 214148/214150 | TaqI |
| 37 | 46277/46281 | BamHI | 86 | 102121/102117 | SphI | 135 | 158586/158590 | BamHI | 184 | 215257/215259 | TaqI |
| 38 | 46738/46740 | TaqI | 87 | 102208/102210 | TaqI | 136 | 158935/158939 | BamHI | 185 | 216385/216381 | SphI |
| 39 | 47495/47491 | SphI | 88 | 104169/104171 | TaqI | 137 | 159068/159070 | TaqI | 186 | 217037/217039 | TaqI |
| 40 | 48147/48149 | TaqI | 89 | 104535/104537 | TaqI | 138 | 159241/159237 | SphI | 187 | 217110/217112 | TaqI |
| 41 | 49165/49167 | TaqI | 90 | 105034/105036 | TaqI | 139 | 160666/160662 | SphI | 188 | 219194/219196 | TaqI |
| 42 | 50518/50514 | SphI | 91 | 105231/105233 | TaqI | 140 | 161628/161632 | BamHI | 189 | 222748/222744 | SphI |
| 43 | 50909/50911 | TaqI | 92 | 107799/107801 | TaqI | 141 | 162615/162617 | TaqI | 190 | 225191/225187 | SphI |
| 44 | 52320/52322 | TaqI | 93 | 108139/108135 | SphI | 142 | 163516/163518 | TaqI | 191 | 226403/226399 | SphI |
| 45 | 52561/52563 | TaqI | 94 | 108987/108989 | TaqI | 143 | 163859/163855 | SphI | 192 | 226609/226611 | TaqI |
| 46 | 57896/57898 | TaqI | 95 | 109126/109128 | TaqI | 144 | 167786/167782 | SphI | 193 | 228732/228734 | TaqI |
| 47 | 58503/58505 | TaqI | 96 | 110850/110852 | TaqI | 145 | 167790/167786 | SphI | 194 | 228957/228959 | TaqI |
| 48 | 59976/59978 | TaqI | 97 | 112562/112558 | SphI | 146 | 168362/168364 | TaqI | | | |
| 49 | 60458/60460 | TaqI | 98 | 114001/114003 | TaqI | 147 | 169903/169907 | BamHI | | | |

Figure S3: Chromosomal breakpoint and repair patterns

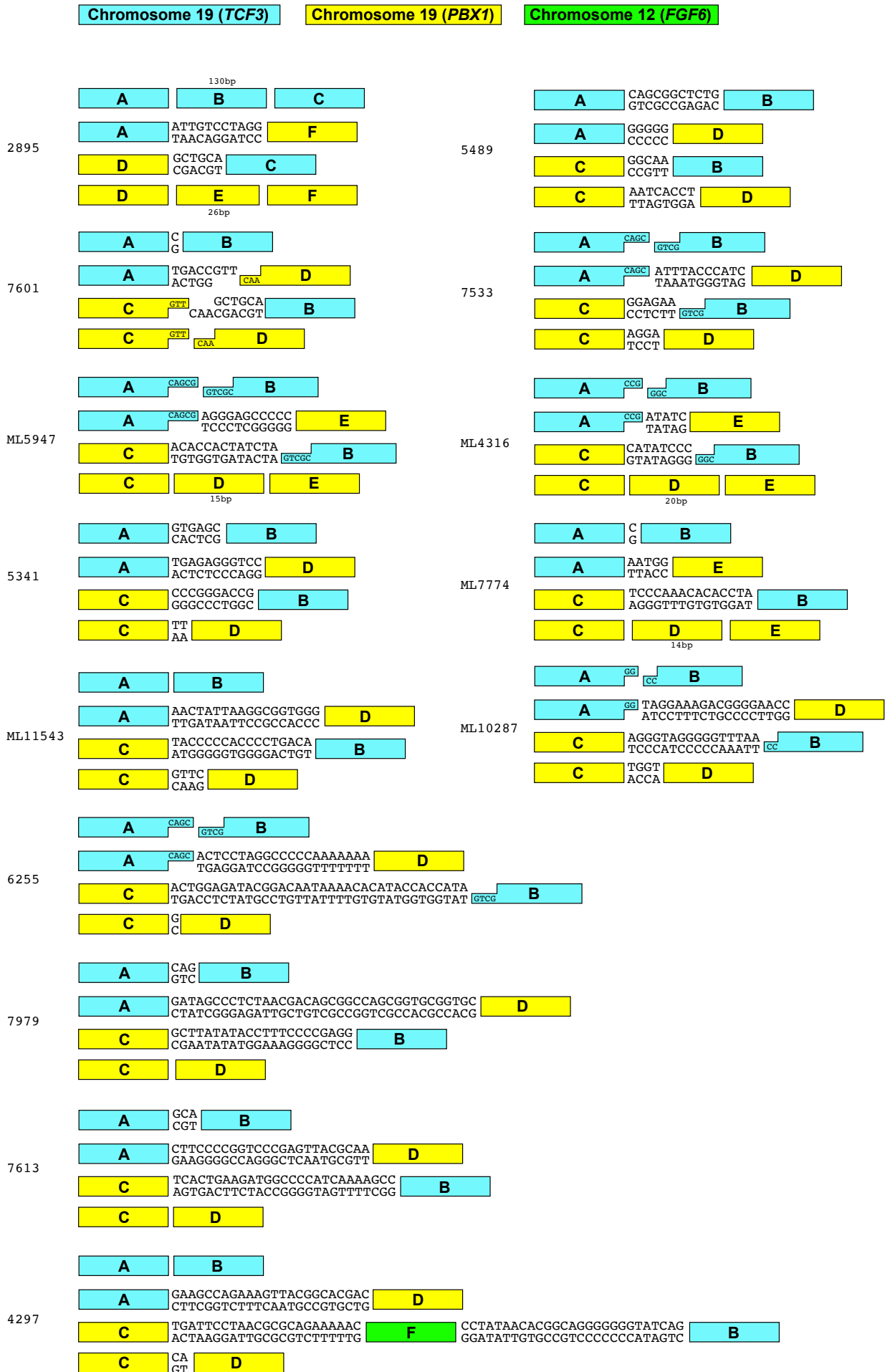


Table S4: Repeats in *PBX1* intron 2

| # | query | %div. | %del. | %ins. | begin | end | orientation | repeat | class/family |
|----|---------------|-------|-------|-------|-------|-------|-------------|------------|------------------|
| 1 | PBX1 intron 2 | 0.0 | 4.8 | 0.0 | 947 | 967 | + | (TATT)n | Simple repeat |
| 2 | PBX1 intron 2 | 15.5 | 0.0 | 0.0 | 1505 | 1533 | + | (TA)n | Simple repeat |
| 3 | PBX1 intron 2 | 0.0 | 0.0 | 0.0 | 2112 | 2142 | + | (AC)n | Simple repeat |
| 4 | PBX1 intron 2 | 20.5 | 0.0 | 0.0 | 3852 | 3893 | + | (TG)n | Simple repeat |
| 5 | PBX1 intron 2 | 23.6 | 3.2 | 0.4 | 5858 | 6108 | + | MIR | SINE/MIR |
| 6 | PBX1 intron 2 | 13.4 | 4.9 | 1.0 | 6236 | 6546 | - | AluSx | SINE/Alu |
| 7 | PBX1 intron 2 | 6.4 | 0.3 | 0.3 | 6899 | 7763 | - | L1PA7 | LINE/L1 |
| 8 | PBX1 intron 2 | 17.9 | 2.3 | 7.3 | 7853 | 8498 | - | L1MB7 | LINE/L1 |
| 9 | PBX1 intron 2 | 9.8 | 0.0 | 3.9 | 8508 | 8560 | - | L1MA10 | LINE/L1 |
| 10 | PBX1 intron 2 | 0.0 | 0.0 | 0.0 | 8563 | 8605 | + | (TA)n | Simple repeat |
| 11 | PBX1 intron 2 | 12.5 | 3.5 | 0.0 | 8608 | 8895 | - | AluSx | SINE/Alu |
| 12 | PBX1 intron 2 | 17.7 | 22.8 | 0.0 | 9132 | 9210 | - | MamTip2 | DNA/hAT-Tip100 |
| 13 | PBX1 intron 2 | 34.5 | 4.4 | 0.7 | 9315 | 9451 | + | MIRb | SINE/MIR |
| 14 | PBX1 intron 2 | 8.7 | 6.8 | 2.2 | 9771 | 9946 | - | Charlie5 | DNA/hAT-Charlie |
| 15 | PBX1 intron 2 | 14.8 | 3.0 | 9.0 | 9958 | 10173 | - | MER33 | DNA/hAT-Charlie |
| 16 | PBX1 intron 2 | 8.7 | 2.7 | 0.7 | 10174 | 10473 | - | AluSx | SINE/Alu |
| 17 | PBX1 intron 2 | 15.7 | 2.6 | 7.9 | 10474 | 10574 | - | MER33 | DNA/hAT-Charlie |
| 18 | PBX1 intron 2 | 27.6 | 5.7 | 10.6 | 10946 | 11098 | + | MIRc | SINE/MIR |
| 19 | PBX1 intron 2 | 9.4 | 2.4 | 0.0 | 11390 | 11677 | + | AluSx | SINE/Alu |
| 20 | PBX1 intron 2 | 38.5 | 1.9 | 0.0 | 15183 | 15286 | - | L2d2 | LINE/L2 |
| 21 | PBX1 intron 2 | 23.9 | 0.0 | 1.1 | 16556 | 16648 | - | MIR | SINE/MIR |
| 22 | PBX1 intron 2 | 8.4 | 0.0 | 0.7 | 16972 | 17269 | - | AluSx | SINE/Alu |
| 23 | PBX1 intron 2 | 11.3 | 0.0 | 1.0 | 17273 | 17566 | - | AluSx | SINE/Alu |
| 24 | PBX1 intron 2 | 7.7 | 0.7 | 0.0 | 17918 | 18214 | - | AluSx | SINE/Alu |
| 25 | PBX1 intron 2 | 12.5 | 2.6 | 5.3 | 18653 | 18691 | + | (TTAT)n | Simple repeat |
| 26 | PBX1 intron 2 | 25.7 | 2.0 | 6.0 | 18924 | 19109 | - | L4 A Mam | LINE/RTE-X |
| 27 | PBX1 intron 2 | 9.3 | 0.0 | 0.7 | 19110 | 19412 | - | AluSx | SINE/Alu |
| 28 | PBX1 intron 2 | 25.7 | 2.0 | 6.0 | 19413 | 19469 | - | L4 A Mam | LINE/RTE-X |
| 29 | PBX1 intron 2 | 35.0 | 10.3 | 1.6 | 19489 | 19662 | + | L2c | LINE/L2 |
| 30 | PBX1 intron 2 | 34.2 | 5.6 | 3.7 | 19708 | 19868 | - | L2c | LINE/L2 |
| 31 | PBX1 intron 2 | 22.9 | 2.2 | 19.8 | 20665 | 20800 | + | L2c | LINE/L2 |
| 32 | PBX1 intron 2 | 19.5 | 0.0 | 3.7 | 20907 | 20991 | + | 7SLRNA | srpRNA |
| 33 | PBX1 intron 2 | 26.1 | 0.0 | 0.0 | 20935 | 21026 | - | SVA A | Retroposon/SVA |
| 34 | PBX1 intron 2 | 3.0 | 0.0 | 0.0 | 21040 | 21073 | + | (GA)n | Simple repeat |
| 35 | PBX1 intron 2 | 7.7 | 3.3 | 3.3 | 21701 | 21730 | + | (TAA)n | Simple repeat |
| 36 | PBX1 intron 2 | 0.0 | 0.0 | 0.0 | 22641 | 22666 | + | (CATT)n | Simple repeat |
| 37 | PBX1 intron 2 | 24.2 | 5.7 | 10.1 | 23205 | 23328 | + | MIRc | SINE/MIR |
| 38 | PBX1 intron 2 | 26.7 | 3.9 | 2.9 | 24017 | 24120 | + | MIR3 | SINE/MIR |
| 39 | PBX1 intron 2 | 0.0 | 0.0 | 0.0 | 25163 | 25189 | + | (T)n | Simple repeat |
| 40 | PBX1 intron 2 | 17.4 | 2.9 | 2.9 | 25830 | 25864 | + | GA-rich | Low complexity |
| 41 | PBX1 intron 2 | 24.0 | 2.5 | 4.5 | 26151 | 26307 | + | MER135 | DNA |
| 42 | PBX1 intron 2 | 32.8 | 0.0 | 0.0 | 26463 | 26523 | - | MIR3 | SINE/MIR |
| 43 | PBX1 intron 2 | 16.0 | 0.7 | 1.7 | 26616 | 26913 | + | AluJb | SINE/Alu |
| 44 | PBX1 intron 2 | 15.7 | 0.0 | 0.0 | 27535 | 27700 | - | AluSx | SINE/Alu |
| 45 | PBX1 intron 2 | 10.0 | 0.3 | 0.0 | 27701 | 28000 | - | AluSx | SINE/Alu |
| 46 | PBX1 intron 2 | 27.0 | 8.3 | 3.0 | 28058 | 28405 | + | MamRep434 | DNA/TcMar-Tigger |
| 47 | PBX1 intron 2 | 13.0 | 0.0 | 0.7 | 29644 | 29946 | - | AluSx | SINE/Alu |
| 48 | PBX1 intron 2 | 32.0 | 4.4 | 2.9 | 30173 | 30307 | + | MIRb | SINE/MIR |
| 49 | PBX1 intron 2 | 19.3 | 19.1 | 0.9 | 30759 | 30847 | - | MIRb | SINE/MIR |
| 50 | PBX1 intron 2 | 25.0 | 0.0 | 3.9 | 30913 | 30966 | - | MIR3 | SINE/MIR |
| 51 | PBX1 intron 2 | 8.9 | 5.0 | 0.3 | 30987 | 31269 | - | AluSx | SINE/Alu |
| 52 | PBX1 intron 2 | 14.1 | 14.1 | 0.0 | 31300 | 31548 | - | MER33 | DNA/hAT-Charlie |
| 53 | PBX1 intron 2 | 18.7 | 0.0 | 5.1 | 31549 | 31611 | - | MIR3 | SINE/MIR |
| 54 | PBX1 intron 2 | 27.3 | 2.4 | 4.0 | 32803 | 32928 | + | MamRep1151 | LTR |
| 55 | PBX1 intron 2 | 12.0 | 4.0 | 1.3 | 33131 | 33206 | + | MER20 | DNA/hAT-Charlie |
| 56 | PBX1 intron 2 | 27.4 | 8.2 | 0.0 | 33372 | 33444 | + | MIRc | SINE/MIR |

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|-----|---------------|------|------|------|-------|-------|---|------------|-------------------|
| 57 | PBX1 intron 2 | 24.7 | 1.1 | 1.1 | 33586 | 33679 | - | MIR1 Amn | SINE/MIR |
| 58 | PBX1 intron 2 | 21.3 | 1.8 | 5.7 | 34494 | 34548 | + | (AATT)n | Simple repeat |
| 59 | PBX1 intron 2 | 21.0 | 5.5 | 3.5 | 34602 | 34932 | - | MSTD | LTR/ERV1-MaLR |
| 60 | PBX1 intron 2 | 20.7 | 2.1 | 2.1 | 34970 | 35017 | + | (TTCTCTT)n | Simple repeat |
| 61 | PBX1 intron 2 | 23.4 | 5.4 | 3.5 | 35018 | 35025 | + | (TTCC)n | Simple repeat |
| 62 | PBX1 intron 2 | 29.5 | 10.4 | 0.0 | 35507 | 35699 | - | MIRc | SINE/MIR |
| 63 | PBX1 intron 2 | 29.6 | 0.0 | 0.0 | 35732 | 35777 | + | (TT)n | Simple repeat |
| 64 | PBX1 intron 2 | 34.4 | 0.8 | 0.8 | 36753 | 36875 | - | MER94B | DNA/hAT-Blackjack |
| 65 | PBX1 intron 2 | 8.9 | 1.0 | 0.0 | 36936 | 37237 | - | AluSx | SINE/Alu |
| 66 | PBX1 intron 2 | 30.4 | 0.7 | 2.0 | 37352 | 37502 | + | MamSINE1 | SINE/tRNA-RTE |
| 67 | PBX1 intron 2 | 8.2 | 1.0 | 0.7 | 37644 | 37951 | + | AluSx | SINE/Alu |
| 68 | PBX1 intron 2 | 15.8 | 4.5 | 2.2 | 40469 | 40512 | + | (TTTTAAG)n | Simple repeat |
| 69 | PBX1 intron 2 | 34.1 | 5.8 | 2.2 | 40542 | 40618 | - | MIR | SINE/MIR |
| 70 | PBX1 intron 2 | 0.0 | 0.0 | 0.0 | 40619 | 40651 | + | (T)n | Simple repeat |
| 71 | PBX1 intron 2 | 13.5 | 0.4 | 0.4 | 40662 | 40929 | - | AluSx | SINE/Alu |
| 72 | PBX1 intron 2 | 34.1 | 5.8 | 2.2 | 40930 | 41014 | - | MIR | SINE/MIR |
| 73 | PBX1 intron 2 | 10.8 | 0.0 | 12.8 | 41121 | 41173 | - | L2c | LINE/L2 |
| 74 | PBX1 intron 2 | 35.6 | 6.2 | 4.1 | 41707 | 41946 | - | L2c | LINE/L2 |
| 75 | PBX1 intron 2 | 27.1 | 12.4 | 4.6 | 42411 | 42693 | + | MamRep434 | DNA/TcMar-Tigger |
| 76 | PBX1 intron 2 | 13.9 | 0.0 | 0.0 | 42897 | 43126 | + | AluSx | SINE/Alu |
| 77 | PBX1 intron 2 | 15.3 | 0.0 | 9.2 | 43143 | 43272 | + | AluSx | SINE/Alu |
| 78 | PBX1 intron 2 | 22.1 | 7.1 | 0.0 | 43314 | 43453 | + | L2a | LINE/L2 |
| 79 | PBX1 intron 2 | 33.6 | 7.8 | 1.6 | 44050 | 44524 | - | L2c | LINE/L2 |
| 80 | PBX1 intron 2 | 19.5 | 0.0 | 0.0 | 44698 | 44738 | + | MER117 | DNA/hAT-Charlie |
| 81 | PBX1 intron 2 | 29.6 | 3.4 | 3.4 | 44738 | 44856 | + | MER117 | DNA/hAT-Charlie |
| 82 | PBX1 intron 2 | 17.7 | 1.6 | 0.0 | 44873 | 44934 | - | L2b | LINE/L2 |
| 83 | PBX1 intron 2 | 25.4 | 1.7 | 1.7 | 44899 | 44958 | + | L2a | LINE/L2 |
| 84 | PBX1 intron 2 | 31.7 | 0.0 | 0.0 | 45210 | 45291 | - | MIRc | SINE/MIR |
| 85 | PBX1 intron 2 | 27.5 | 0.0 | 2.0 | 46434 | 46537 | + | L2b | LINE/L2 |
| 86 | PBX1 intron 2 | 3.0 | 0.0 | 0.3 | 47927 | 48226 | - | AluY | SINE/Alu |
| 87 | PBX1 intron 2 | 28.6 | 7.1 | 0.0 | 49498 | 49707 | + | MIR | SINE/MIR |
| 88 | PBX1 intron 2 | 18.4 | 16.7 | 4.1 | 49754 | 49861 | - | L1ME4b | LINE/L1 |
| 89 | PBX1 intron 2 | 35.8 | 7.3 | 1.3 | 50008 | 50225 | + | L2b | LINE/L2 |
| 90 | PBX1 intron 2 | 32.0 | 2.6 | 2.6 | 50880 | 51033 | - | MIR3 | SINE/MIR |
| 91 | PBX1 intron 2 | 13.7 | 0.0 | 0.7 | 51462 | 51763 | - | AluSx | SINE/Alu |
| 92 | PBX1 intron 2 | 28.2 | 1.2 | 1.7 | 53456 | 53697 | - | MIR | SINE/MIR |
| 93 | PBX1 intron 2 | 27.2 | 11.4 | 1.1 | 53854 | 54098 | + | MamSINE1 | SINE/tRNA-RTE |
| 94 | PBX1 intron 2 | 27.1 | 9.4 | 4.5 | 54231 | 54400 | + | MER103C | DNA/hAT-Charlie |
| 95 | PBX1 intron 2 | 31.5 | 2.1 | 5.7 | 56294 | 56438 | - | Charlie4z | DNA/hAT-Charlie |
| 96 | PBX1 intron 2 | 13.7 | 5.8 | 6.9 | 56581 | 56871 | + | AluJb | SINE/Alu |
| 97 | PBX1 intron 2 | 11.2 | 0.0 | 0.0 | 57366 | 57670 | - | AluSx | SINE/Alu |
| 98 | PBX1 intron 2 | 9.6 | 1.1 | 0.0 | 57691 | 57971 | - | AluSx | SINE/Alu |
| 99 | PBX1 intron 2 | 25.4 | 0.0 | 6.1 | 57995 | 58046 | + | (TCTT)n | Simple repeat |
| 100 | PBX1 intron 2 | 25.7 | 0.0 | 2.1 | 59454 | 59502 | + | (CA)n | Simple repeat |
| 101 | PBX1 intron 2 | 9.3 | 4.1 | 0.0 | 59512 | 59801 | - | AluSx | SINE/Alu |
| 102 | PBX1 intron 2 | 27.7 | 2.3 | 6.8 | 61193 | 61544 | + | Charlie23a | DNA/hAT-Charlie |
| 103 | PBX1 intron 2 | 9.3 | 0.0 | 0.0 | 62390 | 62412 | + | (TG)n | Simple repeat |
| 104 | PBX1 intron 2 | 4.3 | 0.0 | 0.0 | 62499 | 62522 | + | (A)n | Simple repeat |
| 105 | PBX1 intron 2 | 20.8 | 2.1 | 0.0 | 63256 | 63303 | - | L3b | LINE/CR1 |
| 106 | PBX1 intron 2 | 15.9 | 0.0 | 0.0 | 65400 | 65427 | + | (TC)n | Simple repeat |
| 107 | PBX1 intron 2 | 20.9 | 9.0 | 1.4 | 65428 | 65694 | - | UCON64 | Unknown |
| 108 | PBX1 intron 2 | 34.3 | 3.9 | 1.1 | 66148 | 66327 | - | MIR3 | SINE/MIR |
| 109 | PBX1 intron 2 | 28.1 | 15.0 | 0.0 | 67301 | 67453 | - | MIRb | SINE/MIR |
| 110 | PBX1 intron 2 | 4.5 | 0.0 | 0.0 | 67965 | 67987 | + | (T)n | Simple repeat |
| 111 | PBX1 intron 2 | 29.9 | 12.4 | 0.0 | 69611 | 69747 | - | MIR3 | SINE/MIR |
| 112 | PBX1 intron 2 | 11.2 | 0.0 | 0.0 | 69835 | 70138 | - | AluSx | SINE/Alu |
| 113 | PBX1 intron 2 | 24.4 | 5.5 | 2.7 | 70336 | 70588 | + | MIR | SINE/MIR |
| 114 | PBX1 intron 2 | 12.0 | 3.7 | 0.0 | 73547 | 73573 | + | (TG)n | Simple repeat |
| 115 | PBX1 intron 2 | 29.4 | 0.0 | 1.5 | 74124 | 74192 | + | MIR3 | SINE/MIR |
| 116 | PBX1 intron 2 | 10.7 | 0.0 | 0.0 | 75259 | 75288 | + | (AC)n | Simple repeat |

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|-----|---------------|------|------|------|--------|--------|---|-----------|-------------------|
| 117 | PBX1 intron 2 | 31.7 | 5.9 | 1.1 | 75685 | 75853 | + | MIRb | SINE/MIR |
| 118 | PBX1 intron 2 | 17.3 | 0.0 | 0.0 | 76254 | 76355 | + | U6 | snRNA |
| 119 | PBX1 intron 2 | 18.7 | 0.3 | 0.3 | 76356 | 76650 | - | AluJb | SINE/Alu |
| 120 | PBX1 intron 2 | 12.2 | 0.0 | 0.3 | 77235 | 77538 | - | AluSx | SINE/Alu |
| 121 | PBX1 intron 2 | 20.5 | 5.0 | 0.0 | 78701 | 78740 | + | (TTTTG)n | Simple repeat |
| 122 | PBX1 intron 2 | 27.4 | 0.0 | 0.0 | 79401 | 79473 | - | L2d2 | LINE/L2 |
| 123 | PBX1 intron 2 | 33.5 | 5.4 | 2.2 | 80329 | 80551 | - | MIRb | SINE/MIR |
| 124 | PBX1 intron 2 | 26.6 | 5.8 | 1.2 | 82565 | 82720 | + | MIR1 Amn | SINE/MIR |
| 125 | PBX1 intron 2 | 27.2 | 12.3 | 0.7 | 84104 | 84225 | + | MIR3 | SINE/MIR |
| 126 | PBX1 intron 2 | 22.0 | 0.0 | 3.5 | 84358 | 84503 | + | MER5B | DNA/hAT-Charlie |
| 127 | PBX1 intron 2 | 6.0 | 0.0 | 0.3 | 84505 | 84803 | - | AluY | SINE/Alu |
| 128 | PBX1 intron 2 | 29.6 | 2.4 | 1.2 | 85199 | 85362 | - | MIRb | SINE/MIR |
| 129 | PBX1 intron 2 | 14.5 | 1.0 | 0.0 | 86906 | 87209 | - | AluSx | SINE/Alu |
| 130 | PBX1 intron 2 | 20.9 | 4.5 | 0.0 | 88246 | 88289 | + | GA-rich | Low complexity |
| 131 | PBX1 intron 2 | 0.0 | 0.0 | 0.0 | 88620 | 88659 | + | (GT)n | Simple repeat |
| 132 | PBX1 intron 2 | 11.6 | 2.2 | 0.0 | 88757 | 88980 | - | AluSx | SINE/Alu |
| 133 | PBX1 intron 2 | 34.3 | 3.8 | 2.1 | 89077 | 89311 | - | MIRc | SINE/MIR |
| 134 | PBX1 intron 2 | 23.7 | 12.7 | 3.0 | 89387 | 89562 | - | L1ME2 | LINE/L1 |
| 135 | PBX1 intron 2 | 13.7 | 1.0 | 0.0 | 89563 | 89855 | - | AluSx | SINE/Alu |
| 136 | PBX1 intron 2 | 23.7 | 12.7 | 3.0 | 89856 | 90039 | - | L1ME2 | LINE/L1 |
| 137 | PBX1 intron 2 | 13.4 | 1.1 | 0.0 | 90180 | 90448 | + | AluSx | SINE/Alu |
| 138 | PBX1 intron 2 | 11.6 | 0.3 | 0.3 | 91790 | 92101 | - | AluSx | SINE/Alu |
| 139 | PBX1 intron 2 | 14.0 | 5.9 | 1.9 | 92679 | 92729 | + | Mam R4 | LINE/Dong-R4 |
| 140 | PBX1 intron 2 | 13.1 | 8.0 | 0.0 | 93494 | 93553 | + | (TTATA)n | Simple repeat |
| 141 | PBX1 intron 2 | 30.4 | 3.2 | 1.6 | 93744 | 94120 | + | Mam R4 | LINE/Dong-R4 |
| 142 | PBX1 intron 2 | 5.6 | 0.0 | 0.0 | 94856 | 94874 | + | (A)n | Simple repeat |
| 143 | PBX1 intron 2 | 28.2 | 0.0 | 0.0 | 95352 | 95436 | + | MIRb | SINE/MIR |
| 144 | PBX1 intron 2 | 23.5 | 3.3 | 1.7 | 95436 | 95690 | - | MIR | SINE/MIR |
| 145 | PBX1 intron 2 | 29.5 | 0.0 | 0.0 | 96612 | 96740 | + | MLT1N2 | LTR/ERV-L-MaLR |
| 146 | PBX1 intron 2 | 9.3 | 0.0 | 0.0 | 98114 | 98415 | - | AluSx | SINE/Alu |
| 147 | PBX1 intron 2 | 13.8 | 0.0 | 0.0 | 98736 | 99031 | + | AluSx | SINE/Alu |
| 148 | PBX1 intron 2 | 18.6 | 0.0 | 1.8 | 99822 | 99998 | + | (CCTT)n | Simple repeat |
| 149 | PBX1 intron 2 | 6.7 | 9.4 | 0.0 | 99999 | 100030 | + | (CT)n | Simple repeat |
| 150 | PBX1 intron 2 | 18.6 | 0.0 | 1.8 | 100031 | 100053 | + | (CCTT)n | Simple repeat |
| 151 | PBX1 intron 2 | 10.7 | 5.4 | 1.9 | 101303 | 101654 | - | THE1B | LTR/ERV-L-MaLR |
| 152 | PBX1 intron 2 | 15.4 | 0.0 | 0.6 | 101963 | 102275 | - | AluSx | SINE/Alu |
| 153 | PBX1 intron 2 | 29.2 | 3.5 | 3.5 | 102534 | 102675 | - | MLT1N2 | LTR/ERV-L-MaLR |
| 154 | PBX1 intron 2 | 4.9 | 0.0 | 0.0 | 103036 | 103056 | + | (ATT)n | Simple repeat |
| 155 | PBX1 intron 2 | 24.2 | 0.0 | 14.5 | 103101 | 103187 | + | Mam R4 | LINE/Dong-R4 |
| 156 | PBX1 intron 2 | 28.9 | 1.6 | 2.7 | 103210 | 103394 | + | Mam R4 | LINE/Dong-R4 |
| 157 | PBX1 intron 2 | 33.8 | 4.3 | 0.5 | 103485 | 103695 | - | MIRb | SINE/MIR |
| 158 | PBX1 intron 2 | 25.0 | 6.1 | 0.0 | 104021 | 104151 | + | (AT)n | Simple repeat |
| 159 | PBX1 intron 2 | 26.4 | 10.6 | 0.5 | 104301 | 104479 | + | Tigger12 | DNA/TcMar-Tigger |
| 160 | PBX1 intron 2 | 20.1 | 2.9 | 0.0 | 106496 | 106650 | - | L1M3 | LINE/L1 |
| 161 | PBX1 intron 2 | 32.6 | 0.0 | 0.0 | 108668 | 108739 | + | (TTTT)n | Simple repeat |
| 162 | PBX1 intron 2 | 20.2 | 1.7 | 1.7 | 109597 | 109605 | + | (TCTTTT)n | Simple repeat |
| 163 | PBX1 intron 2 | 17.7 | 0.0 | 0.0 | 109609 | 109640 | + | (T)n | Simple repeat |
| 164 | PBX1 intron 2 | 20.2 | 1.7 | 1.7 | 109643 | 109655 | + | (TCTTTT)n | Simple repeat |
| 165 | PBX1 intron 2 | 8.3 | 0.0 | 0.0 | 110155 | 110323 | - | AluSx | SINE/Alu |
| 166 | PBX1 intron 2 | 15.4 | 5.1 | 0.0 | 110660 | 110698 | - | MIR3 | SINE/MIR |
| 167 | PBX1 intron 2 | 13.2 | 0.0 | 0.0 | 111537 | 111561 | + | (C)n | Simple repeat |
| 168 | PBX1 intron 2 | 28.7 | 2.3 | 0.0 | 111616 | 111839 | - | MIRc | SINE/MIR |
| 169 | PBX1 intron 2 | 6.4 | 1.3 | 0.0 | 112032 | 112109 | + | MADE1 | DNA/TcMar-Mariner |
| 170 | PBX1 intron 2 | 30.0 | 2.9 | 1.9 | 113308 | 113409 | + | MIR | SINE/MIR |
| 171 | PBX1 intron 2 | 3.0 | 0.0 | 2.3 | 113773 | 114080 | - | AluY | SINE/Alu |
| 172 | PBX1 intron 2 | 28.1 | 5.4 | 3.2 | 114134 | 114225 | - | L2d2 | LINE/L2 |
| 173 | PBX1 intron 2 | 22.8 | 0.0 | 6.2 | 116476 | 116578 | - | MIRc | SINE/MIR |
| 174 | PBX1 intron 2 | 15.6 | 0.0 | 1.0 | 117070 | 117166 | - | L1PA16 | LINE/L1 |
| 175 | PBX1 intron 2 | 24.8 | 8.7 | 5.8 | 117379 | 117562 | - | L3 | LINE/CR1 |
| 176 | PBX1 intron 2 | 16.4 | 9.6 | 0.4 | 117671 | 117878 | + | AluJb | SINE/Alu |

supplement

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|-----|---------------|------|------|------|--------|--------|---|------------|------------------|
| 177 | PBX1 intron 2 | 25.1 | 0.0 | 2.6 | 118020 | 118059 | + | (TATACA)n | Simple repeat |
| 178 | PBX1 intron 2 | 13.8 | 0.0 | 0.0 | 118346 | 118533 | + | L1PA15 | LINE/L1 |
| 179 | PBX1 intron 2 | 22.4 | 0.8 | 9.2 | 119088 | 119205 | - | L2a | LINE/L2 |
| 180 | PBX1 intron 2 | 34.1 | 9.4 | 0.0 | 119949 | 120086 | - | MIRc | SINE/MIR |
| 181 | PBX1 intron 2 | 31.1 | 10.4 | 0.0 | 120087 | 120274 | - | MIRc | SINE/MIR |
| 182 | PBX1 intron 2 | 18.1 | 4.6 | 4.6 | 120491 | 120806 | - | AluJb | SINE/Alu |
| 183 | PBX1 intron 2 | 32.3 | 5.2 | 2.0 | 121654 | 121846 | - | MIRc | SINE/MIR |
| 184 | PBX1 intron 2 | 29.5 | 9.2 | 5.4 | 122292 | 122542 | - | MIRb | SINE/MIR |
| 185 | PBX1 intron 2 | 29.6 | 10.6 | 2.6 | 122647 | 122892 | + | MIRb | SINE/MIR |
| 186 | PBX1 intron 2 | 7.0 | 0.4 | 0.7 | 123402 | 123676 | + | AluY | SINE/Alu |
| 187 | PBX1 intron 2 | 33.8 | 4.6 | 8.1 | 123747 | 123969 | + | MamRep38 | DNA/hAT-Tip100 |
| 188 | PBX1 intron 2 | 14.4 | 0.7 | 0.7 | 123970 | 124277 | + | AluJb | SINE/Alu |
| 189 | PBX1 intron 2 | 33.8 | 4.6 | 8.1 | 124278 | 124333 | + | MamRep38 | DNA/hAT-Tip100 |
| 190 | PBX1 intron 2 | 28.4 | 3.5 | 8.1 | 124920 | 125061 | + | X6a DNA | DNA/TcMar-Tigger |
| 191 | PBX1 intron 2 | 18.4 | 0.0 | 0.0 | 125983 | 126033 | + | (T)n | Simple repeat |
| 192 | PBX1 intron 2 | 20.7 | 0.0 | 2.9 | 126458 | 126492 | + | (CTTT)n | Simple repeat |
| 193 | PBX1 intron 2 | 23.3 | 4.1 | 0.0 | 127180 | 127252 | + | 7SLRNA | srpRNA |
| 194 | PBX1 intron 2 | 22.4 | 5.6 | 0.0 | 127197 | 127303 | - | SVA A | Retroposon/SVA |
| 195 | PBX1 intron 2 | 36.6 | 2.9 | 1.9 | 127472 | 127574 | - | MIRc | SINE/MIR |
| 196 | PBX1 intron 2 | 10.3 | 0.3 | 0.0 | 127701 | 128001 | - | AluSx | SINE/Alu |
| 197 | PBX1 intron 2 | 16.0 | 2.3 | 1.1 | 128468 | 128814 | + | Tigger4b | DNA/TcMar-Tigger |
| 198 | PBX1 intron 2 | 32.8 | 0.0 | 0.0 | 129029 | 129086 | + | L2a | LINE/L2 |
| 199 | PBX1 intron 2 | 14.7 | 2.6 | 0.0 | 129402 | 129439 | + | (ATATTGT)n | Simple repeat |
| 200 | PBX1 intron 2 | 33.5 | 8.8 | 1.3 | 129488 | 129635 | - | MIRc | SINE/MIR |
| 201 | PBX1 intron 2 | 32.8 | 11.8 | 1.3 | 130814 | 131017 | + | L2c | LINE/L2 |
| 202 | PBX1 intron 2 | 32.2 | 0.0 | 0.0 | 131061 | 131175 | + | L2b | LINE/L2 |
| 203 | PBX1 intron 2 | 36.2 | 5.6 | 6.5 | 131502 | 131717 | + | L2c | LINE/L2 |
| 204 | PBX1 intron 2 | 20.4 | 8.7 | 0.9 | 131747 | 131954 | + | Chap1a Mam | DNA/hAT-Charlie |
| 205 | PBX1 intron 2 | 33.7 | 13.5 | 2.7 | 132009 | 132416 | + | L2c | LINE/L2 |
| 206 | PBX1 intron 2 | 22.7 | 12.5 | 0.0 | 133174 | 133261 | + | L3 | LINE/CR1 |
| 207 | PBX1 intron 2 | 21.7 | 0.0 | 0.0 | 133433 | 133464 | + | (TTGACT)n | Simple repeat |
| 208 | PBX1 intron 2 | 31.7 | 5.3 | 2.3 | 133598 | 133768 | + | MIRb | SINE/MIR |
| 209 | PBX1 intron 2 | 27.7 | 10.1 | 0.4 | 133771 | 133998 | - | MIR | SINE/MIR |
| 210 | PBX1 intron 2 | 30.9 | 10.8 | 0.0 | 135248 | 135441 | + | Tigger15a | DNA/TcMar-Tigger |
| 211 | PBX1 intron 2 | 26.0 | 10.7 | 0.4 | 135450 | 135673 | - | MIR | SINE/MIR |
| 212 | PBX1 intron 2 | 25.0 | 10.7 | 9.9 | 135707 | 135986 | + | Tigger15a | DNA/TcMar-Tigger |
| 213 | PBX1 intron 2 | 26.4 | 3.8 | 1.8 | 137491 | 137737 | + | MIRc | SINE/MIR |
| 214 | PBX1 intron 2 | 26.7 | 3.3 | 0.0 | 138236 | 138295 | + | AmnL2-1 | LINE/L2 |
| 215 | PBX1 intron 2 | 19.7 | 3.5 | 0.0 | 139715 | 140003 | - | 7SLRNA | srpRNA |
| 216 | PBX1 intron 2 | 3.6 | 13.8 | 0.0 | 140651 | 140679 | + | GA-rich | Low complexity |
| 217 | PBX1 intron 2 | 15.8 | 0.9 | 0.5 | 141729 | 141944 | - | MER20 | DNA/hAT-Charlie |
| 218 | PBX1 intron 2 | 27.4 | 1.0 | 1.0 | 142995 | 143097 | - | X6b DNA | DNA/TcMar-Tigger |
| 219 | PBX1 intron 2 | 31.7 | 1.2 | 0.0 | 143323 | 143404 | - | AmnL2-1 | LINE/L2 |
| 220 | PBX1 intron 2 | 0.0 | 0.0 | 0.0 | 144084 | 144107 | + | (GT)n | Simple repeat |
| 221 | PBX1 intron 2 | 0.0 | 0.0 | 0.0 | 144108 | 144145 | + | (GA)n | Simple repeat |
| 222 | PBX1 intron 2 | 27.6 | 10.3 | 12.1 | 145003 | 145082 | - | MIR | SINE/MIR |
| 223 | PBX1 intron 2 | 14.1 | 1.3 | 0.6 | 145083 | 145397 | - | L1PA17 | LINE/L1 |
| 224 | PBX1 intron 2 | 27.6 | 10.3 | 12.1 | 145398 | 145559 | - | MIR | SINE/MIR |
| 225 | PBX1 intron 2 | 28.8 | 6.3 | 1.5 | 145588 | 145714 | - | L2b | LINE/L2 |
| 226 | PBX1 intron 2 | 26.5 | 0.0 | 1.0 | 146736 | 146834 | + | MIR | SINE/MIR |
| 227 | PBX1 intron 2 | 11.9 | 0.3 | 0.3 | 147088 | 147398 | - | AluSx | SINE/Alu |
| 228 | PBX1 intron 2 | 7.7 | 0.0 | 0.0 | 147954 | 148250 | - | AluY | SINE/Alu |
| 229 | PBX1 intron 2 | 0.0 | 0.0 | 0.0 | 148867 | 148883 | + | (A)n | Simple repeat |
| 230 | PBX1 intron 2 | 12.5 | 0.0 | 3.7 | 150244 | 150271 | + | (CCTT)n | Simple repeat |
| 231 | PBX1 intron 2 | 21.2 | 0.0 | 3.0 | 150921 | 150988 | - | MIR3 | SINE/MIR |
| 232 | PBX1 intron 2 | 25.0 | 1.8 | 0.0 | 151637 | 151692 | + | MIR | SINE/MIR |
| 233 | PBX1 intron 2 | 21.4 | 1.6 | 28.8 | 151714 | 151842 | + | L2d2 | LINE/L2 |
| 234 | PBX1 intron 2 | 29.5 | 4.8 | 0.0 | 152234 | 152338 | + | L2a | LINE/L2 |
| 235 | PBX1 intron 2 | 27.4 | 0.0 | 0.0 | 153263 | 153335 | + | 7SLRNA | srpRNA |
| 236 | PBX1 intron 2 | 24.1 | 6.4 | 0.9 | 153275 | 153374 | - | SVA A | Retroposon/SVA |

supplement

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|-----|---------------|------|------|------|--------|--------|---|-----------|-------------------|
| 237 | PBX1 intron 2 | 0.0 | 0.0 | 0.0 | 153375 | 153419 | + | (AC)n | Simple repeat |
| 238 | PBX1 intron 2 | 27.6 | 9.2 | 1.9 | 154617 | 154820 | - | MIRb | SINE/MIR |
| 239 | PBX1 intron 2 | 32.3 | 3.1 | 1.0 | 155742 | 155838 | + | AmnSINE1 | SINE/5S-Deu-L2 |
| 240 | PBX1 intron 2 | 22.1 | 16.1 | 3.2 | 156195 | 156306 | + | MER5B | DNA/hAT-Charlie |
| 241 | PBX1 intron 2 | 0.0 | 0.0 | 3.9 | 158113 | 158139 | + | (GT)n | Simple repeat |
| 242 | PBX1 intron 2 | 25.8 | 3.4 | 0.4 | 158538 | 158687 | - | L2a | LINE/L2 |
| 243 | PBX1 intron 2 | 12.6 | 8.3 | 0.0 | 159291 | 159326 | + | (TC)n | Simple repeat |
| 244 | PBX1 intron 2 | 29.2 | 3.0 | 3.0 | 159709 | 159775 | - | MIR3 | SINE/MIR |
| 245 | PBX1 intron 2 | 12.0 | 3.7 | 0.5 | 161064 | 161280 | - | MER30 | DNA/hAT-Charlie |
| 246 | PBX1 intron 2 | 0.0 | 0.0 | 0.0 | 161360 | 161398 | + | (T)n | Simple repeat |
| 247 | PBX1 intron 2 | 22.2 | 31.5 | 0.6 | 162435 | 162561 | - | MIRb | SINE/MIR |
| 248 | PBX1 intron 2 | 30.6 | 0.0 | 1.6 | 163980 | 164042 | + | L2d2 | LINE/L2 |
| 249 | PBX1 intron 2 | 14.9 | 2.6 | 2.6 | 164718 | 164731 | + | GA-rich | Low complexity |
| 250 | PBX1 intron 2 | 16.3 | 3.1 | 0.0 | 164732 | 165020 | + | AluJb | SINE/Alu |
| 251 | PBX1 intron 2 | 14.9 | 2.6 | 2.6 | 165021 | 165044 | + | GA-rich | Low complexity |
| 252 | PBX1 intron 2 | 14.0 | 3.1 | 0.0 | 166171 | 166202 | + | (ATATAC)n | Simple repeat |
| 253 | PBX1 intron 2 | 22.1 | 2.3 | 0.0 | 166203 | 166208 | + | (TATA)n | Simple repeat |
| 254 | PBX1 intron 2 | 27.4 | 2.6 | 4.6 | 166211 | 166474 | - | MIR | SINE/MIR |
| 255 | PBX1 intron 2 | 26.8 | 2.9 | 4.5 | 166484 | 166551 | + | (ATAA)n | Simple repeat |
| 256 | PBX1 intron 2 | 30.0 | 5.1 | 2.2 | 166552 | 166728 | - | MIRb | SINE/MIR |
| 257 | PBX1 intron 2 | 26.5 | 25.3 | 0.0 | 166823 | 166905 | + | MamSINE1 | SINE/tRNA-RTE |
| 258 | PBX1 intron 2 | 13.2 | 0.0 | 0.0 | 167748 | 167772 | + | (GT)n | Simple repeat |
| 259 | PBX1 intron 2 | 37.0 | 10.7 | 0.3 | 168988 | 169243 | + | L2c | LINE/L2 |
| 260 | PBX1 intron 2 | 6.3 | 1.3 | 0.0 | 169244 | 169322 | + | MADE1 | DNA/TcMar-Mariner |
| 261 | PBX1 intron 2 | 37.0 | 10.7 | 0.3 | 169323 | 169412 | + | L2c | LINE/L2 |
| 262 | PBX1 intron 2 | 31.0 | 10.0 | 3.3 | 169590 | 169819 | + | L2c | LINE/L2 |
| 263 | PBX1 intron 2 | 20.4 | 4.3 | 5.7 | 169923 | 170027 | + | L2c | LINE/L2 |
| 264 | PBX1 intron 2 | 31.4 | 0.9 | 2.8 | 170322 | 170429 | + | UCON58 | DNA |
| 265 | PBX1 intron 2 | 28.1 | 1.6 | 0.0 | 171241 | 171304 | - | L2b | LINE/L2 |
| 266 | PBX1 intron 2 | 28.4 | 0.0 | 0.0 | 172148 | 172186 | + | GA-rich | Low complexity |
| 267 | PBX1 intron 2 | 19.1 | 0.0 | 8.9 | 173978 | 174026 | + | A-rich | Low complexity |
| 268 | PBX1 intron 2 | 7.8 | 4.6 | 0.6 | 174061 | 174135 | - | L1ME1 | LINE/L1 |
| 269 | PBX1 intron 2 | 11.4 | 1.3 | 0.0 | 174160 | 174467 | - | AluSx | SINE/Alu |
| 270 | PBX1 intron 2 | 21.8 | 3.1 | 7.7 | 174468 | 174985 | - | L1ME1 | LINE/L1 |
| 271 | PBX1 intron 2 | 21.0 | 8.9 | 2.8 | 174997 | 175265 | - | AluJb | SINE/Alu |
| 272 | PBX1 intron 2 | 19.2 | 0.0 | 0.0 | 175268 | 175319 | - | L1ME1 | LINE/L1 |
| 273 | PBX1 intron 2 | 0.0 | 0.0 | 0.0 | 176443 | 176479 | + | (TG)n | Simple repeat |
| 274 | PBX1 intron 2 | 20.4 | 4.1 | 0.0 | 177062 | 177110 | - | L2c | LINE/L2 |
| 275 | PBX1 intron 2 | 23.8 | 0.0 | 1.6 | 177283 | 177346 | - | L2b | LINE/L2 |
| 276 | PBX1 intron 2 | 29.3 | 10.2 | 2.8 | 177350 | 177546 | - | L2c | LINE/L2 |
| 277 | PBX1 intron 2 | 0.0 | 0.0 | 0.0 | 178429 | 178464 | + | (GT)n | Simple repeat |
| 278 | PBX1 intron 2 | 13.5 | 0.0 | 0.0 | 178950 | 179238 | + | AluSx | SINE/Alu |
| 279 | PBX1 intron 2 | 30.1 | 2.5 | 5.9 | 180429 | 180710 | - | MLT1J | LTR/ERV-L-MaLR |
| 280 | PBX1 intron 2 | 22.4 | 0.0 | 0.0 | 181289 | 181346 | + | L2a | LINE/L2 |
| 281 | PBX1 intron 2 | 4.9 | 0.0 | 4.5 | 181564 | 181586 | + | (GTG)n | Simple repeat |
| 282 | PBX1 intron 2 | 26.3 | 3.0 | 1.5 | 181677 | 181811 | - | MIRb | SINE/MIR |
| 283 | PBX1 intron 2 | 11.5 | 0.0 | 10.1 | 183059 | 183396 | - | AluSx | SINE/Alu |
| 284 | PBX1 intron 2 | 31.8 | 5.1 | 1.1 | 183682 | 183859 | - | MIRb | SINE/MIR |
| 285 | PBX1 intron 2 | 30.2 | 1.0 | 2.1 | 183973 | 184068 | + | (TA)n | Simple repeat |
| 286 | PBX1 intron 2 | 26.8 | 2.2 | 4.5 | 184796 | 184932 | + | LTR90A | LTR |
| 287 | PBX1 intron 2 | 25.2 | 7.4 | 0.0 | 185214 | 185348 | + | LTR90A | LTR |
| 288 | PBX1 intron 2 | 30.1 | 3.7 | 3.3 | 185775 | 186045 | - | L1ME4c | LINE/L1 |
| 289 | PBX1 intron 2 | 16.9 | 0.0 | 0.0 | 186354 | 186387 | + | (GGAT)n | Simple repeat |
| 290 | PBX1 intron 2 | 18.0 | 1.6 | 2.5 | 186565 | 186809 | + | AluJb | SINE/Alu |
| 291 | PBX1 intron 2 | 0.0 | 0.0 | 0.0 | 186835 | 186872 | + | (GT)n | Simple repeat |
| 292 | PBX1 intron 2 | 18.8 | 7.2 | 5.9 | 187647 | 187722 | + | Charlie1b | DNA/hAT-Charlie |
| 293 | PBX1 intron 2 | 8.4 | 0.3 | 0.0 | 187723 | 188021 | + | AluSx | SINE/Alu |
| 294 | PBX1 intron 2 | 18.8 | 7.2 | 5.9 | 188022 | 188270 | + | Charlie1b | DNA/hAT-Charlie |
| 295 | PBX1 intron 2 | 10.7 | 0.3 | 0.3 | 188271 | 188570 | - | AluSx | SINE/Alu |
| 296 | PBX1 intron 2 | 18.8 | 7.2 | 5.9 | 188571 | 188729 | + | Charlie1b | DNA/hAT-Charlie |

supplement

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|-----|---------------|------|------|-----|--------|--------|---|-----------|----------------|
| 297 | PBX1 intron 2 | 0.0 | 0.0 | 0.0 | 188896 | 188935 | + | (TG)n | Simple repeat |
| 298 | PBX1 intron 2 | 28.2 | 0.0 | 5.2 | 190093 | 190153 | + | (TTGTTT)n | Simple repeat |
| 299 | PBX1 intron 2 | 22.0 | 0.0 | 0.0 | 191348 | 191392 | + | (GTGTGT)n | Simple repeat |
| 300 | PBX1 intron 2 | 11.2 | 4.8 | 0.0 | 191887 | 192137 | - | AluSx | SINE/Alu |
| 301 | PBX1 intron 2 | 7.4 | 0.0 | 0.0 | 192688 | 192716 | + | (A)n | Simple repeat |
| 302 | PBX1 intron 2 | 5.5 | 0.0 | 0.0 | 194390 | 194408 | + | (TAT)n | Simple repeat |
| 303 | PBX1 intron 2 | 21.3 | 0.0 | 0.0 | 195514 | 195574 | + | L2b | LINE/L2 |
| 304 | PBX1 intron 2 | 29.9 | 6.8 | 2.6 | 195632 | 195851 | + | L1ME3A | LINE/L1 |
| 305 | PBX1 intron 2 | 20.1 | 1.7 | 0.8 | 197053 | 197172 | + | (CCTT)n | Simple repeat |
| 306 | PBX1 intron 2 | 7.0 | 10.0 | 0.0 | 197249 | 197279 | + | A-rich | Low complexity |
| 307 | PBX1 intron 2 | 3.4 | 0.3 | 0.0 | 198137 | 198431 | - | AluY | SINE/Alu |
| 308 | PBX1 intron 2 | 28.7 | 7.0 | 3.2 | 199618 | 199787 | - | MIRc | SINE/MIR |
| 309 | PBX1 intron 2 | 29.8 | 3.5 | 4.1 | 199880 | 200222 | - | MLT1J | LTR/ERV-L-MaLR |
| 310 | PBX1 intron 2 | 25.6 | 8.6 | 5.8 | 201122 | 201341 | - | UCON64 | Unknown |
| 311 | PBX1 intron 2 | 29.2 | 0.8 | 2.4 | 202233 | 202485 | - | MIRb | SINE/MIR |
| 312 | PBX1 intron 2 | 29.5 | 1.1 | 0.0 | 202620 | 202714 | - | L2d2 | LINE/L2 |
| 313 | PBX1 intron 2 | 24.3 | 1.4 | 0.0 | 203233 | 203302 | - | MIRc | SINE/MIR |
| 314 | PBX1 intron 2 | 9.4 | 3.1 | 1.0 | 203387 | 203702 | - | AluSx | SINE/Alu |
| 315 | PBX1 intron 2 | 11.0 | 6.0 | 0.0 | 203703 | 203726 | + | (TTTTTC)n | Simple repeat |
| 316 | PBX1 intron 2 | 23.7 | 2.4 | 0.0 | 203894 | 204062 | - | MER45A | DNA/hAT-Tip100 |
| 317 | PBX1 intron 2 | 5.3 | 0.0 | 0.0 | 204339 | 204358 | + | (A)n | Simple repeat |
| 318 | PBX1 intron 2 | 28.2 | 14.2 | 2.0 | 204896 | 205029 | - | MIRb | SINE/MIR |
| 319 | PBX1 intron 2 | 13.7 | 0.3 | 0.7 | 205477 | 205771 | + | AluSx | SINE/Alu |
| 320 | PBX1 intron 2 | 30.7 | 8.0 | 0.0 | 206174 | 206261 | + | MIRc | SINE/MIR |
| 321 | PBX1 intron 2 | 27.0 | 13.5 | 0.0 | 206954 | 207042 | - | MIRc | SINE/MIR |
| 322 | PBX1 intron 2 | 0.0 | 0.0 | 0.0 | 209933 | 209962 | + | (CA)n | Simple repeat |
| 323 | PBX1 intron 2 | 27.4 | 4.1 | 5.5 | 212684 | 212830 | + | L2c | LINE/L2 |
| 324 | PBX1 intron 2 | 0.0 | 0.0 | 0.0 | 213589 | 213624 | + | (TG)n | Simple repeat |
| 325 | PBX1 intron 2 | 0.0 | 0.0 | 0.0 | 213632 | 213668 | + | (GA)n | Simple repeat |
| 326 | PBX1 intron 2 | 14.0 | 4.5 | 0.0 | 213843 | 214128 | + | AluSx | SINE/Alu |
| 327 | PBX1 intron 2 | 15.2 | 2.4 | 0.0 | 215051 | 215345 | + | AluJb | SINE/Alu |
| 328 | PBX1 intron 2 | 20.8 | 10.2 | 2.2 | 215615 | 215731 | + | MIR | SINE/MIR |
| 329 | PBX1 intron 2 | 3.6 | 0.0 | 0.0 | 215732 | 215814 | - | AluY | SINE/Alu |
| 330 | PBX1 intron 2 | 24.8 | 9.2 | 3.4 | 217711 | 217906 | - | MamSINE1 | SINE/tRNA-RTE |
| 331 | PBX1 intron 2 | 10.6 | 2.1 | 0.0 | 218725 | 218771 | - | MLT1J | LTR/ERV-L-MaLR |
| 332 | PBX1 intron 2 | 26.0 | 1.8 | 0.0 | 220064 | 220118 | + | (GTGT)n | Simple repeat |
| 333 | PBX1 intron 2 | 15.8 | 0.0 | 3.5 | 221230 | 221259 | + | (ACAA)n | Simple repeat |
| 334 | PBX1 intron 2 | 10.3 | 0.0 | 2.6 | 221411 | 221450 | + | MIRb | SINE/MIR |
| 335 | PBX1 intron 2 | 30.4 | 6.2 | 7.6 | 223035 | 223194 | - | L2d2 | LINE/L2 |
| 336 | PBX1 intron 2 | 0.0 | 0.0 | 0.0 | 223371 | 223410 | + | (TG)n | Simple repeat |
| 337 | PBX1 intron 2 | 29.2 | 0.0 | 0.0 | 225049 | 225090 | + | (TTT)n | Simple repeat |
| 338 | PBX1 intron 2 | 7.9 | 3.7 | 0.0 | 225454 | 225480 | + | (CTTTT)n | Simple repeat |
| 339 | PBX1 intron 2 | 32.3 | 1.3 | 0.0 | 227184 | 227262 | + | (CTTC)n | Simple repeat |
| 340 | PBX1 intron 2 | 16.5 | 15.4 | 9.0 | 228473 | 228532 | - | L1MB3 | LINE/L1 |
| 341 | PBX1 intron 2 | 10.0 | 0.4 | 2.4 | 228533 | 228789 | - | AluY | SINE/Alu |
| 342 | PBX1 intron 2 | 16.5 | 15.4 | 9.0 | 228790 | 228981 | - | L1MB3 | LINE/L1 |

Table S5: Repeats in *TCF3* intron 16

| # | query | %div. | %del. | %ins. | begin | end | orientation | repeat | class/family |
|---|----------------|-------|-------|-------|-------|------|-------------|--------|-----------------|
| 1 | TCF3 intron 16 | 28.6 | 14.8 | 0.8 | 337 | 1058 | - | L2a | LINE/L2 |
| 2 | TCF3 intron 16 | 24.7 | 5.1 | 0.0 | 1182 | 1359 | + | MER20 | DNA/hAT-Charlie |
| 3 | TCF3 intron 16 | 29.5 | 2.3 | 3.8 | 1979 | 2193 | - | L1M5 | LINE/L1 |
| 4 | TCF3 intron 16 | 24.8 | 4.7 | 2.5 | 2312 | 2543 | - | AluJb | SINE/Alu |
| 5 | TCF3 intron 16 | 20.3 | 7.2 | 0.0 | 2544 | 2612 | + | U6 | snRNA |
| 6 | TCF3 intron 16 | 10.0 | 0.0 | 0.0 | 2616 | 2904 | - | AluY | SINE/Alu |

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|-----|---------------|-------|-------|-------|-----------------------------------------|---|
| 57 | PBX1 intron 2 | 24428 | 24466 | RSS23 | cacacacagacacagagttctcacttgcagcagtcg | + |
| 58 | PBX1 intron 2 | 24432 | 24459 | RSS12 | cacagacacagagttctcacttgcagca | + |
| 59 | PBX1 intron 2 | 24595 | 24622 | RSS12 | cacagtcactgaagtcctcttttatat | + |
| 60 | PBX1 intron 2 | 25113 | 25151 | RSS23 | cacacagagatgaggaaaagagaaaagagaaatacact | + |
| 61 | PBX1 intron 2 | 25115 | 25153 | RSS23 | cacagagatgaggaaaaagagaaaagagaaatacactcc | + |
| 62 | PBX1 intron 2 | 25177 | 25215 | RSS23 | cacacttcacatagcttcgaaactaaaaaaaaaaaa | - |
| 63 | PBX1 intron 2 | 25742 | 25769 | RSS12 | caaagtgccgagacctttctgactc | + |
| 64 | PBX1 intron 2 | 25758 | 25796 | RSS23 | cactgagtgatgaggacaaaggtgaggagtcaggaaaa | - |
| 65 | PBX1 intron 2 | 26366 | 26404 | RSS23 | catggtgacaggtgataatctcctccaccctaaata | - |
| 66 | PBX1 intron 2 | 26505 | 26543 | RSS23 | caccacaacaggaacagaaatctaattcaactcaatca | - |
| 67 | PBX1 intron 2 | 27104 | 27142 | RSS23 | cacagagcagctgtttacctaagcacagggggcgccg | - |
| 68 | PBX1 intron 2 | 27196 | 27234 | RSS23 | cacactgtgtcctcctcattaggctcaccaaaaacgg | - |
| 69 | PBX1 intron 2 | 27960 | 27998 | RSS23 | caaagtgctgggattacaggcgtcagccaccgctcctgg | + |
| 70 | PBX1 intron 2 | 28579 | 28606 | RSS12 | cacagaaggcccaacttgcaaatgcc | - |
| 71 | PBX1 intron 2 | 28827 | 28865 | RSS23 | cacagactgaacacaacttgattgaacaaaggccctc | - |
| 72 | PBX1 intron 2 | 28913 | 28951 | RSS23 | cacaggctcatagtttgagtgtagagctggatgagg | + |
| 73 | PBX1 intron 2 | 29227 | 29254 | RSS12 | cagcacctcagactctgctcagacact | - |
| 74 | PBX1 intron 2 | 29248 | 29275 | RSS12 | caaagcctctgtggccaggccagcacc | - |
| 75 | PBX1 intron 2 | 29483 | 29521 | RSS23 | caccaggctccacgcgctggccttgctgaggataaaga | + |
| 76 | PBX1 intron 2 | 29758 | 29796 | RSS23 | cacacactgtaatgccagtacttgggaggtgaggca | - |
| 77 | PBX1 intron 2 | 29874 | 29912 | RSS23 | cacttgcaggccgaggcaggcagatcacttgagccca | - |
| 78 | PBX1 intron 2 | 29997 | 30024 | RSS12 | caccaggagtcaaaatccaacaaaatga | - |
| 79 | PBX1 intron 2 | 30092 | 30130 | RSS23 | cacagatattctaacttttggggcatagattaattct | - |
| 80 | PBX1 intron 2 | 30253 | 30280 | RSS12 | cacattttatagatgaaacaaaaacag | - |
| 81 | PBX1 intron 2 | 30393 | 30431 | RSS23 | cactgggtgaaaacacacacatgtacttctttaaata | + |
| 82 | PBX1 intron 2 | 30919 | 30957 | RSS23 | cagaatgctaaagctgcaacagagacttgggagatcatt | + |
| 83 | PBX1 intron 2 | 31229 | 31267 | RSS23 | caaagtgctgggattacaggcatgagccactgtgcccg | + |
| 84 | PBX1 intron 2 | 31513 | 31540 | RSS12 | cacagtggtagtggcaaccttactaga | + |
| 85 | PBX1 intron 2 | 31583 | 31610 | RSS12 | cactgaggccagaactgtgattaacta | + |
| 86 | PBX1 intron 2 | 32051 | 32089 | RSS23 | cacagccaactgccaccgtgggaccactactgaaaact | - |
| 87 | PBX1 intron 2 | 34142 | 34169 | RSS12 | caccccaaatagctcatttcaatacc | - |
| 88 | PBX1 intron 2 | 34735 | 34762 | RSS12 | caccatgtgatgaactccaccatgttac | - |
| 89 | PBX1 intron 2 | 34804 | 34831 | RSS12 | caaagcaattcccacagtaacaaacca | + |
| 90 | PBX1 intron 2 | 34816 | 34854 | RSS23 | cacagtaacaaaccactcctaggatagcaatgtaatc | + |
| 91 | PBX1 intron 2 | 35476 | 35503 | RSS12 | cattgtgtacacctcggagcgtatagc | + |
| 92 | PBX1 intron 2 | 37313 | 37351 | RSS23 | cactgtgtaaacaggcatggggctgcctcaggaatcaa | - |
| 93 | PBX1 intron 2 | 37499 | 37537 | RSS23 | cacaccgatcaagattgatccagccactgaagtaatcca | + |
| 94 | PBX1 intron 2 | 37646 | 37684 | RSS23 | caaagtgctgggattacaggcatgagccactgcgccag | - |
| 95 | PBX1 intron 2 | 38439 | 38466 | RSS12 | cacagtatccaactgcagcatttaaatg | - |
| 96 | PBX1 intron 2 | 38625 | 38663 | RSS23 | cacagagctgaatcccactcctagggtgcatggctgag | - |
| 97 | PBX1 intron 2 | 39242 | 39269 | RSS12 | cacagactcatacagcctccacagacac | + |
| 98 | PBX1 intron 2 | 39261 | 39299 | RSS23 | cacagacacaaagcttctgtatcctacatgtacctgc | + |
| 99 | PBX1 intron 2 | 39808 | 39835 | RSS12 | cattctgactctgttctcatggttact | - |
| 100 | PBX1 intron 2 | 39896 | 39934 | RSS23 | cacaaagagataaaaaggaaaagcagaaaaataaaatg | - |
| 101 | PBX1 intron 2 | 39905 | 39932 | RSS12 | caaagagataaaaaggaaaagcagaaaaa | - |
| 102 | PBX1 intron 2 | 40991 | 41018 | RSS12 | catagtggtgcaagaacaacttacata | - |
| 103 | PBX1 intron 2 | 41063 | 41101 | RSS23 | cacagtggtccattactctaagggttacaatctgaggt | + |
| 104 | PBX1 intron 2 | 41445 | 41472 | RSS12 | cacaaaagaatgactcagttctacacca | - |
| 105 | PBX1 intron 2 | 41506 | 41533 | RSS12 | cacagtatctataaatgaaaaaaaaa | - |
| 106 | PBX1 intron 2 | 41510 | 41548 | RSS23 | cacttctctaaaagcacagatctcataaatgaaaaaa | - |
| 107 | PBX1 intron 2 | 44620 | 44658 | RSS23 | cacagagctcacagacataggaaaacctgatagaaaaa | - |
| 108 | PBX1 intron 2 | 44887 | 44925 | RSS23 | cacagtactggccatgctgggcactcagtaagtatct | - |
| 109 | PBX1 intron 2 | 46021 | 46048 | RSS12 | caccctgctcagcatgttaggcacatt | + |
| 110 | PBX1 intron 2 | 46981 | 47019 | RSS23 | cacagagccctggaaccagccccttctgcttcaaaggt | - |
| 111 | PBX1 intron 2 | 47317 | 47344 | RSS12 | cacaggacacagtacagaaccgatcgc | - |
| 112 | PBX1 intron 2 | 47888 | 47926 | RSS23 | cacagaaatgtgaaaaaggccaaagttagagagaaaaa | - |
| 113 | PBX1 intron 2 | 48000 | 48038 | RSS23 | cactgcaagctccgctcccgggttcatgccattctct | + |
| 114 | PBX1 intron 2 | 48186 | 48224 | RSS23 | caaagtgctgggattacaggcgtgagccaccgcgcccg | + |
| 115 | PBX1 intron 2 | 48195 | 48233 | RSS23 | cacagaaggccggcgcggtggctcacgcctgtaatccc | - |
| 116 | PBX1 intron 2 | 49378 | 49416 | RSS23 | cactgccctaggcggaggaagagatgcagaatatgatgg | + |

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|-----|---------------|-------|-------|-------|------------------------------------------|---|
| 117 | PBX1 intron 2 | 50194 | 50232 | RSS23 | cacaatgctaggggggctcacaggagagcctggagaaag | - |
| 118 | PBX1 intron 2 | 50264 | 50291 | RSS12 | cacatacacagatcataaccgcaaca | - |
| 119 | PBX1 intron 2 | 50687 | 50725 | RSS23 | cacagaaataccagaggaaggtcatcctgggagttgatg | - |
| 120 | PBX1 intron 2 | 50960 | 50998 | RSS23 | caaagtgtggttaagtactataccgaggacacagacct | + |
| 121 | PBX1 intron 2 | 51691 | 51729 | RSS23 | cactttgggaggccgaagtgggcagatcacctgagggtca | - |
| 122 | PBX1 intron 2 | 51750 | 51788 | RSS23 | cactgtgcctggcctcagttgaactctttaagattattc | + |
| 123 | PBX1 intron 2 | 52163 | 52190 | RSS12 | cacagtataaaatcaggaatattacacc | - |
| 124 | PBX1 intron 2 | 52614 | 52652 | RSS23 | cacaataccctggcctccccagactcctggctcttaacc | - |
| 125 | PBX1 intron 2 | 52705 | 52743 | RSS23 | cacatagacatatcctgaatcttctctctggagacc | - |
| 126 | PBX1 intron 2 | 53495 | 53522 | RSS12 | catagtgtcaaaccattgacatagatc | + |
| 127 | PBX1 intron 2 | 55789 | 55827 | RSS23 | caggagagaaacaaaagaaggaaactcacaggaaacca | + |
| 128 | PBX1 intron 2 | 55839 | 55866 | RSS12 | cactgccaggcacacccttttgaacc | + |
| 129 | PBX1 intron 2 | 56070 | 56097 | RSS12 | cactttgttgagctattacaatatct | + |
| 130 | PBX1 intron 2 | 56694 | 56721 | RSS12 | caacatagtgagaccctgtttctacaaa | + |
| 131 | PBX1 intron 2 | 57182 | 57220 | RSS23 | cacagggtggtgaggtggaacaaaaaagaaaaagattg | - |
| 132 | PBX1 intron 2 | 57193 | 57220 | RSS12 | cacagggtggtgaggtggaacaaaaaag | - |
| 133 | PBX1 intron 2 | 57631 | 57669 | RSS23 | caaagtgtgggttacaggcgtgagccactgcgcccgg | + |
| 134 | PBX1 intron 2 | 57738 | 57776 | RSS23 | cacagtcttggtcactgcaacctccgctcccggattc | + |
| 135 | PBX1 intron 2 | 57981 | 58019 | RSS23 | cagacagacagaaagagaaggaagactgtaagaaaata | - |
| 136 | PBX1 intron 2 | 58192 | 58230 | RSS23 | cagagccaccaagctaaatcagcccctgaaggagaacct | - |
| 137 | PBX1 intron 2 | 58537 | 58564 | RSS12 | caatttgacttccatcttcttaagaat | + |
| 138 | PBX1 intron 2 | 58959 | 58986 | RSS12 | cacaacagtgcggccagagagaaatgt | - |
| 139 | PBX1 intron 2 | 59019 | 59057 | RSS23 | cacagagattctaggctaacctctgtggacttgacattt | - |
| 140 | PBX1 intron 2 | 59411 | 59449 | RSS23 | cacaccagcaaagtgggtgtgggtgtgatttcaaacag | - |
| 141 | PBX1 intron 2 | 59458 | 59496 | RSS23 | cacacacacactgacacatgcttctatacatacata | + |
| 142 | PBX1 intron 2 | 59466 | 59493 | RSS12 | cacactgacacatgcttctatacatac | + |
| 143 | PBX1 intron 2 | 59761 | 59799 | RSS23 | caaagtgtaggattacaggcatgagccaacacgcctgg | + |
| 144 | PBX1 intron 2 | 60303 | 60341 | RSS23 | cagagagacaaaggcaagcagagagggagatgcaaggc | - |
| 145 | PBX1 intron 2 | 60314 | 60341 | RSS12 | cagagagacaaaggcaagcagagagagg | - |
| 146 | PBX1 intron 2 | 60778 | 60805 | RSS12 | cactgtcctaaaaccacagggtactg | + |
| 147 | PBX1 intron 2 | 60778 | 60816 | RSS23 | cactgtcctaaaaccacagggtactgtatctgaagaa | + |
| 148 | PBX1 intron 2 | 61300 | 61338 | RSS23 | catggacacacatgcagataaatatacctactaaaattc | + |
| 149 | PBX1 intron 2 | 61524 | 61551 | RSS12 | cacagaggtgggagcttctgtctagcc | + |
| 150 | PBX1 intron 2 | 62371 | 62409 | RSS23 | cacacacactcacatacaciaaatgaaagatcttatga | - |
| 151 | PBX1 intron 2 | 62550 | 62577 | RSS12 | caccctccttctgccttctgtaaaatc | + |
| 152 | PBX1 intron 2 | 62761 | 62788 | RSS12 | cacctttgccttctccccacccaaaact | - |
| 153 | PBX1 intron 2 | 64050 | 64077 | RSS12 | cacatcggtaccaacacactcaaaaatc | - |
| 154 | PBX1 intron 2 | 64187 | 64225 | RSS23 | cacgatgctcgggtccatttctcaaatgccaccacctct | - |
| 155 | PBX1 intron 2 | 64312 | 64339 | RSS12 | cagcctagtctagcttccccaaaacatc | - |
| 156 | PBX1 intron 2 | 64712 | 64750 | RSS23 | cactgtgctaggaacagatgtccccaaaagcaattaac | - |
| 157 | PBX1 intron 2 | 65548 | 65575 | RSS12 | cagcacccttacaccgtcacatattt | + |
| 158 | PBX1 intron 2 | 65943 | 65970 | RSS12 | cacaaagctccatatttaactcaaaatg | - |
| 159 | PBX1 intron 2 | 67410 | 67448 | RSS23 | caatgcaactcagaggaaagagatgggctttgaaatca | - |
| 160 | PBX1 intron 2 | 67998 | 68025 | RSS12 | caaagtgttctgaacaaaacttaatt | + |
| 161 | PBX1 intron 2 | 69270 | 69308 | RSS23 | cacagtgtgaatccacgggtggcattctgcatgttcta | - |
| 162 | PBX1 intron 2 | 69652 | 69679 | RSS12 | cactctaggtttcttatctataaaaca | - |
| 163 | PBX1 intron 2 | 70098 | 70136 | RSS23 | caaagtgttaggattacaggcgtgagccacagcacgcag | + |
| 164 | PBX1 intron 2 | 70311 | 70349 | RSS23 | cactacattacacttttcttctatagtagcaggaaatct | - |
| 165 | PBX1 intron 2 | 70428 | 70466 | RSS23 | cacattatataacctcttcttctcagtttctaatct | + |
| 166 | PBX1 intron 2 | 70528 | 70566 | RSS23 | cagaaagcaatataaacagtgctggtgcatgtaagcc | + |
| 167 | PBX1 intron 2 | 70723 | 70761 | RSS23 | cacagccgtggatgaacagtttcttctgtgagccagc | + |
| 168 | PBX1 intron 2 | 71130 | 71157 | RSS12 | cactctctttcaaggttcatgaaat | - |
| 169 | PBX1 intron 2 | 71243 | 71281 | RSS23 | cacaatgctctttgggttctgttctggaatatgaattg | + |
| 170 | PBX1 intron 2 | 71678 | 71705 | RSS12 | cagaatattcgagccttagagtttaact | - |
| 171 | PBX1 intron 2 | 72108 | 72135 | RSS12 | cacaaattaataatacttacttaaacca | + |
| 172 | PBX1 intron 2 | 72299 | 72326 | RSS12 | caccctccatccagcctcgccatatac | + |
| 173 | PBX1 intron 2 | 73032 | 73059 | RSS12 | cacctgttccaagctgaaataagatgc | - |
| 174 | PBX1 intron 2 | 74783 | 74821 | RSS23 | cacacacagccatagcagcagtagcaggtgcccttaactg | - |
| 175 | PBX1 intron 2 | 75159 | 75186 | RSS12 | cagaggggctagcacttttcaagatt | - |
| 176 | PBX1 intron 2 | 75264 | 75302 | RSS23 | cacatacactcacacacactcacaccatgggtgaaaacg | + |

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| | | | | | | |
|-----|---------------|-------|-------|-------|------------------------------------------|---|
| 177 | PBX1 intron 2 | 75420 | 75447 | RSS12 | caccgtcacacatgacattcttgaatga | + |
| 178 | PBX1 intron 2 | 75796 | 75834 | RSS23 | cactctgtaaaaccgatattgctatcccttacagacaag | - |
| 179 | PBX1 intron 2 | 77506 | 77544 | RSS23 | caaagtgtaggattacaggcatgagccactgcagcggc | + |
| 180 | PBX1 intron 2 | 77575 | 77613 | RSS23 | cacagtatctctgggcaaaccagatgtaataagcttgacc | + |
| 181 | PBX1 intron 2 | 78164 | 78202 | RSS23 | cacagagatgaaaccccgtggaactagggcacgggaaga | - |
| 182 | PBX1 intron 2 | 78408 | 78435 | RSS12 | cacagtatctctgacttagaataaaat | - |
| 183 | PBX1 intron 2 | 78788 | 78826 | RSS23 | cacaatggaaataaacagtactagagatggggcttatcc | - |
| 184 | PBX1 intron 2 | 79063 | 79101 | RSS23 | caccaacatgatttctcctttggctcagaccaggaca | + |
| 185 | PBX1 intron 2 | 79270 | 79308 | RSS23 | cacctaaccaataaataaattcatactgaacacttacc | - |
| 186 | PBX1 intron 2 | 79469 | 79507 | RSS23 | cacagtacaccagtcgaagcagagagcagagactgctt | - |
| 187 | PBX1 intron 2 | 79480 | 79507 | RSS12 | cacagtacaccagtcgaagcagagagc | - |
| 188 | PBX1 intron 2 | 79501 | 79539 | RSS23 | cactgtgatcattctaaggaacagaccaccttttattc | + |
| 189 | PBX1 intron 2 | 80139 | 80166 | RSS12 | cactttctagccagtcacacacaagaacc | + |
| 190 | PBX1 intron 2 | 80528 | 80566 | RSS23 | cacagtgtttgtacaaggctttggagttaggtagac | - |
| 191 | PBX1 intron 2 | 81625 | 81663 | RSS23 | caaagtcagatttgaaaacggctttattaagagaaaga | - |
| 192 | PBX1 intron 2 | 82382 | 82420 | RSS23 | cacagatatactcactcccattaatgtgcaaat | + |
| 193 | PBX1 intron 2 | 82616 | 82654 | RSS23 | cacagtcacacagctgtgtcttctgagcttggatcca | - |
| 194 | PBX1 intron 2 | 82769 | 82807 | RSS23 | cacagagagaaaaataaaatcccttcagattcgatctt | - |
| 195 | PBX1 intron 2 | 83785 | 83823 | RSS23 | cactgggttcaaaagttacttaaaagcagactctttcc | - |
| 196 | PBX1 intron 2 | 83796 | 83823 | RSS12 | cactgggttcaaaagttacttaaaagc | - |
| 197 | PBX1 intron 2 | 84355 | 84382 | RSS12 | cagagtgggttcaaccctggctgaaca | + |
| 198 | PBX1 intron 2 | 84763 | 84801 | RSS23 | caaagtgtgggattgcaggcgtgagccaccgtgccag | + |
| 199 | PBX1 intron 2 | 84810 | 84837 | RSS12 | cacaaccacagtcataacacaaaagct | - |
| 200 | PBX1 intron 2 | 85661 | 85688 | RSS12 | cagcctaagtcacatcaatcacaact | - |
| 201 | PBX1 intron 2 | 85713 | 85751 | RSS23 | cacacctgtgtgggttactttgtgtcattctggacct | + |
| 202 | PBX1 intron 2 | 86222 | 86249 | RSS12 | cacataggaacaactaacaccagaaaac | - |
| 203 | PBX1 intron 2 | 86783 | 86821 | RSS23 | cacaatgtgaggcccggggatgggatctgtagcactaca | - |
| 204 | PBX1 intron 2 | 86949 | 86976 | RSS12 | cagtgccttcagcctgggcaaaagagc | - |
| 205 | PBX1 intron 2 | 87387 | 87425 | RSS23 | cactgtgcaaaagtccttaatgtgcacacctagaggagca | - |
| 206 | PBX1 intron 2 | 87619 | 87646 | RSS12 | caacatcattccccctttcaaccac | - |
| 207 | PBX1 intron 2 | 88140 | 88178 | RSS23 | cacagagagcggggcctgcagtggtgagcctaatagaatt | + |
| 208 | PBX1 intron 2 | 88279 | 88317 | RSS23 | caggggaagagggaggtgcagagaacacataaacaacc | + |
| 209 | PBX1 intron 2 | 88394 | 88432 | RSS23 | caccatgctaaagtggatttggctgcaggaggaaagtc | - |
| 210 | PBX1 intron 2 | 88598 | 88636 | RSS23 | cacacacacacacacacacctccctccataagctctgact | - |
| 211 | PBX1 intron 2 | 88602 | 88640 | RSS23 | cacacacacacacacacacacctccctccataagctct | - |
| 212 | PBX1 intron 2 | 88604 | 88642 | RSS23 | cacacacacacacacacacacacctccctccataagct | - |
| 213 | PBX1 intron 2 | 88605 | 88632 | RSS12 | cacacacacacacacacacctccctccataagc | - |
| 214 | PBX1 intron 2 | 88614 | 88652 | RSS23 | cacacacacacacacacacacacacacacacacctccc | - |
| 215 | PBX1 intron 2 | 88616 | 88654 | RSS23 | cacacacacacacacacacacacacacacacaccttc | - |
| 216 | PBX1 intron 2 | 88618 | 88656 | RSS23 | cacacacacacacacacacacacacacacacaccttc | - |
| 217 | PBX1 intron 2 | 88619 | 88646 | RSS12 | cacacacacacacacacacacacacacacacacc | - |
| 218 | PBX1 intron 2 | 88621 | 88648 | RSS12 | cacacacacacacacacacacacacacacacaca | - |
| 219 | PBX1 intron 2 | 88623 | 88650 | RSS12 | cacacacacacacacacacacacacacacacaca | - |
| 220 | PBX1 intron 2 | 88625 | 88652 | RSS12 | cacacacacacacacacacacacacacacacaca | - |
| 221 | PBX1 intron 2 | 88627 | 88654 | RSS12 | cacacacacacacacacacacacacacacacaca | - |
| 222 | PBX1 intron 2 | 88629 | 88656 | RSS12 | cacacacacacacacacacacacacacacacaca | - |
| 223 | PBX1 intron 2 | 88631 | 88658 | RSS12 | cacacacacacacacacacacacacacacacaca | - |
| 224 | PBX1 intron 2 | 90802 | 90840 | RSS23 | cacagtgcattggggtagggtgtctagctctaatattt | + |
| 225 | PBX1 intron 2 | 91557 | 91595 | RSS23 | cacattactcccaatcacaagctcctgatggcagagggc | - |
| 226 | PBX1 intron 2 | 92264 | 92291 | RSS12 | cacactgtcttactgtctcagtaaacc | - |
| 227 | PBX1 intron 2 | 92320 | 92347 | RSS12 | cacaaacagtaagtcaatcacaagaaaa | - |
| 228 | PBX1 intron 2 | 92489 | 92527 | RSS23 | catagtagtttactgcatattgatgccatgtaaaatcc | - |
| 229 | PBX1 intron 2 | 92832 | 92870 | RSS23 | cactgagtagccatcctgatagatcctaacaattattca | - |
| 230 | PBX1 intron 2 | 94197 | 94224 | RSS12 | cattctagcagatgtattcttgatacc | + |
| 231 | PBX1 intron 2 | 94464 | 94502 | RSS23 | cacagatcagggtgagcaaatgaaaggcaaatctaactc | - |
| 232 | PBX1 intron 2 | 94504 | 94542 | RSS23 | caggttgatgggcttaaacctgtagtggtcaataaagcc | - |
| 233 | PBX1 intron 2 | 94521 | 94559 | RSS23 | cagtttaagcccagcaacctgcatgctgtgcaagaaag | + |
| 234 | PBX1 intron 2 | 95149 | 95176 | RSS12 | cacagccattatctgtattaatagatct | - |
| 235 | PBX1 intron 2 | 95211 | 95249 | RSS23 | cacactcggggatatacagctgcaatccagagaaaaagc | - |
| 236 | PBX1 intron 2 | 95480 | 95518 | RSS23 | cacagggtaacagataacatattgaaagtggaataaca | - |

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|-----|---------------|--------|--------|-------|-----------------------------------------|---|
| 237 | PBX1 intron 2 | 95491 | 95518 | RSS12 | cacagggtaacagataacatgatgaaag | - |
| 238 | PBX1 intron 2 | 97289 | 97316 | RSS12 | cactaagtgtgacctctagacaaaacca | - |
| 239 | PBX1 intron 2 | 97811 | 97849 | RSS23 | cacagtcaaataaagaagagttgtagacagagaaaaac | - |
| 240 | PBX1 intron 2 | 98078 | 98105 | RSS12 | cagtgaattgctggtgatccctagacc | - |
| 241 | PBX1 intron 2 | 98375 | 98413 | RSS23 | caaagtgctgggattacaggcgtgagccactgtgccag | + |
| 242 | PBX1 intron 2 | 98445 | 98472 | RSS12 | cacattaactaatacaaaaataaaatt | - |
| 243 | PBX1 intron 2 | 98767 | 98805 | RSS23 | cactttgggaggcctaggtgggcaggtcacctgaggtca | + |
| 244 | PBX1 intron 2 | 99113 | 99140 | RSS12 | cacagctcaaggtattctgcaaaaatc | - |
| 245 | PBX1 intron 2 | 99526 | 99564 | RSS23 | caaagttctgcatattaacctactacaagaaaaaaa | - |
| 246 | PBX1 intron 2 | 100082 | 100109 | RSS12 | catagggagaagcaatcctactaagata | - |
| 247 | PBX1 intron 2 | 100997 | 101035 | RSS23 | cacagacatagactagagggacaccaactaaaaaactc | - |
| 248 | PBX1 intron 2 | 101151 | 101178 | RSS12 | cacagtcaggtgtgaccaaaccaaaact | + |
| 249 | PBX1 intron 2 | 101263 | 101290 | RSS12 | cagaataatgcagaatgatgccaggact | - |
| 250 | PBX1 intron 2 | 101319 | 101357 | RSS23 | cacactgctgataagacataccaagaccggacaaatt | + |
| 251 | PBX1 intron 2 | 101746 | 101773 | RSS12 | cacagaattattacagaattcaaactc | - |
| 252 | PBX1 intron 2 | 102047 | 102085 | RSS23 | cactgtaacctctacctcccaggtttaagtgatcctccc | + |
| 253 | PBX1 intron 2 | 102235 | 102273 | RSS23 | caaagtgctgggattacaggtgtgagccactgaaccag | + |
| 254 | PBX1 intron 2 | 102345 | 102372 | RSS12 | catagggtagctgggtgctacaaacaca | - |
| 255 | PBX1 intron 2 | 103214 | 103241 | RSS12 | cagaatatttgcctcatcagccagaatc | - |
| 256 | PBX1 intron 2 | 103621 | 103659 | RSS23 | cactctgtgacaaagaggttcataacatctctaagcc | - |
| 257 | PBX1 intron 2 | 104077 | 104115 | RSS23 | cacacacacacacatattatacatatgttatataaaata | - |
| 258 | PBX1 intron 2 | 104094 | 104121 | RSS12 | cacacacacacacacacacatattatac | - |
| 259 | PBX1 intron 2 | 104299 | 104326 | RSS12 | cacagtagatcattggcattcaaagatt | + |
| 260 | PBX1 intron 2 | 104853 | 104891 | RSS23 | cagagtgctgaaaagacaagttcaggaccatgtagccaa | - |
| 261 | PBX1 intron 2 | 105133 | 105171 | RSS23 | cacctccaccatgacttaggatcacctgagagagaaata | + |
| 262 | PBX1 intron 2 | 105238 | 105265 | RSS12 | cagggagcctcagagccctgcaaaaatc | + |
| 263 | PBX1 intron 2 | 105265 | 105292 | RSS12 | cacttgccacagcccaagataatatt | + |
| 264 | PBX1 intron 2 | 105296 | 105323 | RSS12 | cactttgacactcttgagcacaagaact | - |
| 265 | PBX1 intron 2 | 105394 | 105432 | RSS23 | cacattggcgcgaggagccggtcctggcagtgccaagct | - |
| 266 | PBX1 intron 2 | 105639 | 105666 | RSS12 | cacagcttctaccagactccaagca | - |
| 267 | PBX1 intron 2 | 106326 | 106364 | RSS23 | cacaccctacttccctttctgggttcatgcaacaaatc | + |
| 268 | PBX1 intron 2 | 107406 | 107444 | RSS23 | cagagagaggaaaatagcagagagaggaaaagaaagtg | + |
| 269 | PBX1 intron 2 | 107515 | 107553 | RSS23 | cacaggcagaaagaaaacaccccttctgatcctccccc | - |
| 270 | PBX1 intron 2 | 107531 | 107569 | RSS23 | cacacggcgcgagggacacaggcagaaagaaaacacccc | - |
| 271 | PBX1 intron 2 | 107816 | 107843 | RSS12 | caccgacagaaatcacaacaaatata | + |
| 272 | PBX1 intron 2 | 108247 | 108285 | RSS23 | catactgatggagggaaaggttaacgacaggggaaacta | - |
| 273 | PBX1 intron 2 | 108460 | 108487 | RSS12 | cactcacacaaaaccctcattccaagg | - |
| 274 | PBX1 intron 2 | 109188 | 109215 | RSS12 | cacttaagctctcagctttgccattaaa | - |
| 275 | PBX1 intron 2 | 109374 | 109401 | RSS12 | cacgccgtacacatttatgtgatattc | - |
| 276 | PBX1 intron 2 | 110430 | 110468 | RSS23 | cacggcattcccataaaagttcatctagttgagaagtt | - |
| 277 | PBX1 intron 2 | 110681 | 110719 | RSS23 | cacagagatgaaatgactatgagctgaaacaagacgcc | + |
| 278 | PBX1 intron 2 | 110802 | 110840 | RSS23 | cacagacatggaggtttaccagggactgatggctaaaag | - |
| 279 | PBX1 intron 2 | 110960 | 110998 | RSS23 | cacatggacaaagaggaaggatgagttgactctaaacca | + |
| 280 | PBX1 intron 2 | 111236 | 111274 | RSS23 | cacagaattatccaggacattccatgccatttatagtt | - |
| 281 | PBX1 intron 2 | 111551 | 111578 | RSS12 | caccaccaccaagaggatctttaaact | + |
| 282 | PBX1 intron 2 | 111829 | 111856 | RSS12 | catcatctgtcaaccaggaaccaataat | - |
| 283 | PBX1 intron 2 | 112952 | 112979 | RSS12 | cagatcctttctgaacaagcagacacc | + |
| 284 | PBX1 intron 2 | 113346 | 113384 | RSS23 | cacttagctagcaagttagggggtgcaggctttgaacc | - |
| 285 | PBX1 intron 2 | 114040 | 114078 | RSS23 | caaagtgctgggattacaggcgtgagccaccgcgcccg | + |
| 286 | PBX1 intron 2 | 114067 | 114105 | RSS23 | caccgcgccggccttactgcttgacattttacaaaacg | + |
| 287 | PBX1 intron 2 | 114401 | 114428 | RSS12 | caccatgtgtccccaccctgcacacact | - |
| 288 | PBX1 intron 2 | 114755 | 114793 | RSS23 | cacaatgattccccactaccaatcacatcaagcctacca | - |
| 289 | PBX1 intron 2 | 114995 | 115022 | RSS12 | cagagagccttgtgtggatacaaacagg | - |
| 290 | PBX1 intron 2 | 114997 | 115024 | RSS12 | cacagagagccttgtgtggatacaaacaca | - |
| 291 | PBX1 intron 2 | 115273 | 115300 | RSS12 | cacagcccatttaggggaaggctaacc | + |
| 292 | PBX1 intron 2 | 116022 | 116060 | RSS23 | cactgtgatgtccacagcagccgatgtctcagtaactg | - |
| 293 | PBX1 intron 2 | 116054 | 116092 | RSS23 | cacagtgaggagcagtctactgggtgggaggggtgctgc | + |
| 294 | PBX1 intron 2 | 116415 | 116442 | RSS12 | cacaggtgcataaatttagaacataact | - |
| 295 | PBX1 intron 2 | 116603 | 116641 | RSS23 | caaactcctgctggtttttttatttctgctgaaaactg | + |
| 296 | PBX1 intron 2 | 117130 | 117157 | RSS12 | caccaaacctcagcatcacacaatatac | - |

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|-----|---------------|--------|--------|-------|------------------------------------------|---|
| 297 | PBX1 intron 2 | 117392 | 117430 | RSS23 | cagaatggggaagtccactgaagcagattcagttcac | - |
| 298 | PBX1 intron 2 | 117673 | 117711 | RSS23 | caaagtgctgggattacaggcatgagccaccattcctgg | - |
| 299 | PBX1 intron 2 | 120244 | 120282 | RSS23 | cacattaacaaggtgatacagaagaagacttagattcc | - |
| 300 | PBX1 intron 2 | 120487 | 120514 | RSS12 | caaaacaaaacaaaacaaaacaaaatcca | - |
| 301 | PBX1 intron 2 | 120492 | 120519 | RSS12 | caaaacaaaacaaaacaaaacaaaacaaa | - |
| 302 | PBX1 intron 2 | 120987 | 121014 | RSS12 | cacaaagtgtccagaacagggaaaaca | - |
| 303 | PBX1 intron 2 | 121455 | 121482 | RSS12 | cacagtgcgccagatcttttgccaata | - |
| 304 | PBX1 intron 2 | 122596 | 122634 | RSS23 | cacgggggaacaggcacctaattgttctcagcagaagct | - |
| 305 | PBX1 intron 2 | 123971 | 124009 | RSS23 | caaagtgctgggattagaggtgtgagccacgtgtctggc | - |
| 306 | PBX1 intron 2 | 124212 | 124250 | RSS23 | cactgcactccagctgggtgataaagtgagaccttgtct | + |
| 307 | PBX1 intron 2 | 125835 | 125862 | RSS12 | cattacggcaaacacctcccaaagtga | + |
| 308 | PBX1 intron 2 | 126439 | 126466 | RSS12 | caaagagagccaagccagaacatcgatt | - |
| 309 | PBX1 intron 2 | 126481 | 126519 | RSS23 | cacggggagagagagatgaggacagggagaaagaaatga | - |
| 310 | PBX1 intron 2 | 126737 | 126764 | RSS12 | cagtaccatattgcaccctgcaataaca | - |
| 311 | PBX1 intron 2 | 127962 | 128000 | RSS23 | caaagtgctggggttacaggcatgagccactgtgcccg | + |
| 312 | PBX1 intron 2 | 128062 | 128100 | RSS23 | cacagfactctagtgtgattgtattatgtcaggatgtg | - |
| 313 | PBX1 intron 2 | 128140 | 128167 | RSS12 | cactctaaaacacagttaaattatcac | - |
| 314 | PBX1 intron 2 | 128524 | 128551 | RSS12 | caccaccatgatgccacaagtggaaaat | + |
| 315 | PBX1 intron 2 | 129531 | 129569 | RSS23 | cacagtttactaggttctaatttcatgaaagggaaatcg | + |
| 316 | PBX1 intron 2 | 129722 | 129760 | RSS23 | cacagtgacctggcgaacagtggtctcaggaaggtcc | - |
| 317 | PBX1 intron 2 | 129724 | 129762 | RSS23 | cacacagtgacctggcgaacagtggtctcaggaaggt | - |
| 318 | PBX1 intron 2 | 129754 | 129792 | RSS23 | cactgtgtgtgcccacaggcctctgcaggaagaaagag | + |
| 319 | PBX1 intron 2 | 130447 | 130474 | RSS12 | caatgaagaacagatctgtccatagact | + |
| 320 | PBX1 intron 2 | 130501 | 130528 | RSS12 | caccatgacgtctgccttttcacaacgt | + |
| 321 | PBX1 intron 2 | 130501 | 130539 | RSS23 | caccatgacgtctgccttttcacaacgtgcagctaata | + |
| 322 | PBX1 intron 2 | 130572 | 130599 | RSS12 | cagactgggagagcactttcacaactct | - |
| 323 | PBX1 intron 2 | 130715 | 130753 | RSS23 | cacagaactagagagactagtatttaagatttctagc | + |
| 324 | PBX1 intron 2 | 132697 | 132735 | RSS23 | caaagtgaggccatgtgcttgcattgatagtctgtca | + |
| 325 | PBX1 intron 2 | 133376 | 133414 | RSS23 | cacaacattcagtgaaactcaaaagatctaccacaatct | - |
| 326 | PBX1 intron 2 | 134454 | 134481 | RSS12 | cacaatcaggtaagtgatattatattcc | - |
| 327 | PBX1 intron 2 | 134487 | 134525 | RSS23 | cacatcacctccccgaccaaagaaaagtcataaaagca | + |
| 328 | PBX1 intron 2 | 134993 | 135031 | RSS23 | cactctgtgcttattatttataaccagtaagaccattatt | - |
| 329 | PBX1 intron 2 | 135023 | 135050 | RSS12 | cacagagtgtttcatacatatcaaaagca | + |
| 330 | PBX1 intron 2 | 135023 | 135061 | RSS23 | cacagagtgtttcatacatatcaaaagcaatttcgtacat | + |
| 331 | PBX1 intron 2 | 135395 | 135433 | RSS23 | cacaggctaggaagccagataaacatacaattagaatca | - |
| 332 | PBX1 intron 2 | 135653 | 135680 | RSS12 | cacagccatgctatcagctatagcact | + |
| 333 | PBX1 intron 2 | 136765 | 136803 | RSS23 | cacacctgtaataagcatctctgttccggcatgttgcg | - |
| 334 | PBX1 intron 2 | 137235 | 137273 | RSS23 | cactgtctgtctccgtgtccccaaccttagagcaaagcc | - |
| 335 | PBX1 intron 2 | 137955 | 137982 | RSS12 | cattgtgttcaacacagaaagaaaaa | - |
| 336 | PBX1 intron 2 | 138587 | 138614 | RSS12 | cacaacctttggcttatattaaaaacc | + |
| 337 | PBX1 intron 2 | 138655 | 138693 | RSS23 | caaagtgcataaggggacatggagagaataaaaaatctc | + |
| 338 | PBX1 intron 2 | 138945 | 138972 | RSS12 | catcataatgtgcacctgaacattcatg | + |
| 339 | PBX1 intron 2 | 139182 | 139220 | RSS23 | cacactcactcacactgaagcccaccttggtaactcaa | - |
| 340 | PBX1 intron 2 | 139285 | 139323 | RSS23 | cactctacctgccactgtagaagcacacagtaagcaca | - |
| 341 | PBX1 intron 2 | 139505 | 139532 | RSS12 | cagatacacacagacctacacaatgtca | - |
| 342 | PBX1 intron 2 | 139863 | 139890 | RSS12 | cactcagtttgatgtcaatatgatcacc | - |
| 343 | PBX1 intron 2 | 140057 | 140095 | RSS23 | cacaatgctacagcaccatcctgaagttgctcggctttc | - |
| 344 | PBX1 intron 2 | 140068 | 140095 | RSS12 | cacaatgctacagcaccatcctgaagtt | - |
| 345 | PBX1 intron 2 | 140196 | 140223 | RSS12 | cagagggacacaaacacatatgtacaaa | + |
| 346 | PBX1 intron 2 | 140566 | 140593 | RSS12 | cattcagagcaactccctacaatctc | + |
| 347 | PBX1 intron 2 | 140707 | 140745 | RSS23 | cacaaccagctttatttgtaaaatgctgcaatagatgc | + |
| 348 | PBX1 intron 2 | 140877 | 140904 | RSS12 | cacagaccaaggggtcttggggaata | + |
| 349 | PBX1 intron 2 | 141616 | 141654 | RSS23 | caaaatactacaaaaggagttctgttttcccccaact | + |
| 350 | PBX1 intron 2 | 142598 | 142625 | RSS12 | cacagaattccagatcaaagtgccattc | - |
| 351 | PBX1 intron 2 | 142710 | 142737 | RSS12 | catagaattccaaaactcagcaatcaaa | - |
| 352 | PBX1 intron 2 | 143697 | 143735 | RSS23 | cacagtcctttcaactcaccactacagatggcaactg | - |
| 353 | PBX1 intron 2 | 143809 | 143836 | RSS12 | cagaatatccaaggtctcataaaagatt | - |
| 354 | PBX1 intron 2 | 144050 | 144077 | RSS12 | cagtattgtgctaagtagactaacacc | + |
| 355 | PBX1 intron 2 | 144052 | 144090 | RSS23 | cacacacctcagtggttagtctcattagccacaatac | - |
| 356 | PBX1 intron 2 | 144068 | 144106 | RSS23 | cacacacacacacacacacacacctcagtggtgttagtc | - |

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|-----|---------------|--------|--------|-------|------------------------------------------|---|
| 357 | PBX1 intron 2 | 144832 | 144870 | RSS23 | cagagcgaggcagagtgactaagtgactgctggaatcct | + |
| 358 | PBX1 intron 2 | 145189 | 145216 | RSS12 | cactctcttgagtgctgtgttcattatt | - |
| 359 | PBX1 intron 2 | 145673 | 145700 | RSS12 | cagtgctcctagtccttgaggtgtacaca | + |
| 360 | PBX1 intron 2 | 146054 | 146081 | RSS12 | caaagctgggtccattgaaacagaaagc | + |
| 361 | PBX1 intron 2 | 146260 | 146298 | RSS23 | caccaagacatttcacgcagaccaccactgcaatttct | + |
| 362 | PBX1 intron 2 | 148211 | 148249 | RSS23 | caaagtgtgggattacaggcgtgagccactgcgccccg | + |
| 363 | PBX1 intron 2 | 148385 | 148423 | RSS23 | cacaaaatcccacatgcgtgggcttgttcctgcaagct | + |
| 364 | PBX1 intron 2 | 149855 | 149882 | RSS12 | cagagaagtttctgcctcttggtaaaac | + |
| 365 | PBX1 intron 2 | 150384 | 150422 | RSS23 | cacacagattgaagtaggcacagaaggcagcagaaagca | + |
| 366 | PBX1 intron 2 | 150720 | 150747 | RSS12 | cacaacattggaaccctcccagagct | - |
| 367 | PBX1 intron 2 | 151105 | 151132 | RSS12 | cacaggtaataagtggttgaagaact | - |
| 368 | PBX1 intron 2 | 152814 | 152841 | RSS12 | caagatgttttcagatcatacaaaaaca | + |
| 369 | PBX1 intron 2 | 152819 | 152846 | RSS12 | cacattgtttttgatgatctgaaaaca | - |
| 370 | PBX1 intron 2 | 152874 | 152901 | RSS12 | cagtggtgggtgtgtacagacatacaca | - |
| 371 | PBX1 intron 2 | 152880 | 152918 | RSS23 | cactgccttgcatagatcagtggtgggtgtgtacagaca | - |
| 372 | PBX1 intron 2 | 153376 | 153403 | RSS12 | cacacacacacacacacacacacacaca | + |
| 373 | PBX1 intron 2 | 153378 | 153405 | RSS12 | cacacacacacacacacacacacacaca | + |
| 374 | PBX1 intron 2 | 153380 | 153407 | RSS12 | cacacacacacacacacacacacacaca | + |
| 375 | PBX1 intron 2 | 153382 | 153409 | RSS12 | cacacacacacacacacacacacacaca | + |
| 376 | PBX1 intron 2 | 153384 | 153411 | RSS12 | cacacacacacacacacacacacacaca | + |
| 377 | PBX1 intron 2 | 153386 | 153413 | RSS12 | cacacacacacacacacacacacacaca | + |
| 378 | PBX1 intron 2 | 153386 | 153424 | RSS23 | cacacacacacacacacacacacacacacacacagaaat | + |
| 379 | PBX1 intron 2 | 153388 | 153415 | RSS12 | cacacacacacacacacacacacacaca | + |
| 380 | PBX1 intron 2 | 153388 | 153426 | RSS23 | cacacacacacacacacacacacacacacacacagaaatc | + |
| 381 | PBX1 intron 2 | 153390 | 153417 | RSS12 | cacacacacacacacacacacacacaca | + |
| 382 | PBX1 intron 2 | 153390 | 153428 | RSS23 | cacacacacacacacacacacacacacacacagaaatcac | + |
| 383 | PBX1 intron 2 | 153392 | 153419 | RSS12 | cacacacacacacacacacacacacaca | + |
| 384 | PBX1 intron 2 | 153396 | 153434 | RSS23 | cacacacacacacacacacacacagaaatcacgaagag | + |
| 385 | PBX1 intron 2 | 153398 | 153425 | RSS12 | cacacacacacacacacacacagaaata | + |
| 386 | PBX1 intron 2 | 153400 | 153427 | RSS12 | cacacacacacacacacacacagaaataca | + |
| 387 | PBX1 intron 2 | 153400 | 153438 | RSS23 | cacacacacacacacacacagaaatcacgaagagaaga | + |
| 388 | PBX1 intron 2 | 153404 | 153442 | RSS23 | cacacacacacacacagaaatcacgaagagaagaaaaa | + |
| 389 | PBX1 intron 2 | 153408 | 153446 | RSS23 | cacacacacacagaaatcacgaagagaagaaaaaaaaa | + |
| 390 | PBX1 intron 2 | 153410 | 153448 | RSS23 | cacacacacagaaatcacgaagagaagaaaaaaaaaaga | + |
| 391 | PBX1 intron 2 | 153414 | 153452 | RSS23 | cacacagaaatcacgaagagaagaaaaaaaaaagaatct | + |
| 392 | PBX1 intron 2 | 153954 | 153981 | RSS12 | catattcttaaacaggacctcataaaac | - |
| 393 | PBX1 intron 2 | 153993 | 154031 | RSS23 | cacaacacaccacaggcaataaaagtctccaagaaat | - |
| 394 | PBX1 intron 2 | 154042 | 154080 | RSS23 | caccctgtggccaagaagagcctctcttcccaagag | - |
| 395 | PBX1 intron 2 | 154778 | 154805 | RSS12 | cacagagttggaagtcagatccaagtct | + |
| 396 | PBX1 intron 2 | 154778 | 154816 | RSS23 | cacagagttggaagtcagatccaagtctgattcctaaac | + |
| 397 | PBX1 intron 2 | 154782 | 154820 | RSS23 | cacagtttaggaatcagacttggatctgactccaactc | - |
| 398 | PBX1 intron 2 | 155200 | 155238 | RSS23 | cacagaaccattttgaacactcatttgcacccaaatc | - |
| 399 | PBX1 intron 2 | 155403 | 155441 | RSS23 | cacaaagtcaaagagtcaaaagcattctgagctccggc | - |
| 400 | PBX1 intron 2 | 155414 | 155441 | RSS12 | cacaaagtcaaagagtcaaaagcattct | - |
| 401 | PBX1 intron 2 | 155442 | 155480 | RSS23 | cacaatgataagagcttttcaatatctcccatattca | - |
| 402 | PBX1 intron 2 | 155453 | 155480 | RSS12 | cacaatgataagagcttttcaatatctc | - |
| 403 | PBX1 intron 2 | 155825 | 155852 | RSS12 | cacagaaatgccagtctgtgagagagaa | + |
| 404 | PBX1 intron 2 | 157123 | 157161 | RSS23 | cacagtagaaatgtcagtcattttccaagaatctctc | - |
| 405 | PBX1 intron 2 | 157579 | 157617 | RSS23 | cactgtaaatatacctcaggaaggaaaccgcagaaaccc | - |
| 406 | PBX1 intron 2 | 158058 | 158085 | RSS12 | caccgagatttgagcagtgccctaaac | - |
| 407 | PBX1 intron 2 | 158098 | 158136 | RSS23 | cacacacacacacacactacactgccaccaatttta | - |
| 408 | PBX1 intron 2 | 159508 | 159535 | RSS12 | caccctgggcagttgctcttcaaaaagg | - |
| 409 | PBX1 intron 2 | 162012 | 162050 | RSS23 | cacacaggcagacagatcaagccgctatgtgagggacaa | - |
| 410 | PBX1 intron 2 | 163405 | 163443 | RSS23 | cacagtgtaggtacagagctgctttactagtaaaaca | - |
| 411 | PBX1 intron 2 | 163578 | 163605 | RSS12 | cactaagacaaaagctgagcccaattc | - |
| 412 | PBX1 intron 2 | 163639 | 163677 | RSS23 | cacagaaaaccaaagcgaaggttcttctgcattatgg | - |
| 413 | PBX1 intron 2 | 164034 | 164061 | RSS12 | cactgtgtcacattaataaaaactaaatc | + |
| 414 | PBX1 intron 2 | 164034 | 164072 | RSS23 | cactgtgtcacattaataaaaactaaatcaggttataatt | + |
| 415 | PBX1 intron 2 | 164734 | 164772 | RSS23 | caaagtgataggattacaggcatgagccaccacgcccag | - |
| 416 | PBX1 intron 2 | 165098 | 165125 | RSS12 | cacatttgtgcagaacctttcaacact | - |

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|-----|---------------|--------|--------|-------|-----------------------------------------|---|
| 597 | PBX1 intron 2 | 223371 | 223398 | RSS12 | cacacacacacacacacacacacacaca | - |
| 598 | PBX1 intron 2 | 223373 | 223400 | RSS12 | cacacacacacacacacacacacacaca | - |
| 599 | PBX1 intron 2 | 223375 | 223402 | RSS12 | cacacacacacacacacacacacacaca | - |
| 600 | PBX1 intron 2 | 223377 | 223404 | RSS12 | cacacacacacacacacacacacacaca | - |
| 601 | PBX1 intron 2 | 223379 | 223406 | RSS12 | cacacacacacacacacacacacacaca | - |
| 602 | PBX1 intron 2 | 223381 | 223408 | RSS12 | cacacacacacacacacacacacacaca | - |
| 603 | PBX1 intron 2 | 223383 | 223410 | RSS12 | cacacacacacacacacacacacacaca | - |
| 604 | PBX1 intron 2 | 223631 | 223658 | RSS12 | cactgaattacatcaccttcaaaaacat | - |
| 605 | PBX1 intron 2 | 223654 | 223681 | RSS12 | cagtgcgtgcaagtactttatgaacaaa | + |
| 606 | PBX1 intron 2 | 223818 | 223856 | RSS23 | cacaaacctccatgcagagtggttctattgccaggagct | - |
| 607 | PBX1 intron 2 | 223906 | 223944 | RSS23 | cacaccgttgggaggctaccttgcctttcccagacc | + |
| 608 | PBX1 intron 2 | 224291 | 224318 | RSS12 | cacacaaggagaaaaacaaaccaaacc | - |
| 609 | PBX1 intron 2 | 224933 | 224971 | RSS23 | catggtgctgcagagataaaaaggagcttttaataatc | + |
| 610 | PBX1 intron 2 | 225472 | 225510 | RSS23 | cacataaataggctcccaatcagagttctgaagaaaaca | - |
| 611 | PBX1 intron 2 | 227125 | 227163 | RSS23 | cacaactaccacgctcatgatcttctcttcaaacct | - |
| 612 | PBX1 intron 2 | 227612 | 227639 | RSS12 | cactgtcccctggggctcaccagatgc | + |
| 613 | PBX1 intron 2 | 227986 | 228013 | RSS12 | caccaagggtcctggtgtttcataaag | + |
| 614 | PBX1 intron 2 | 228099 | 228126 | RSS12 | caccctgtttccaacaggacagagtc | + |

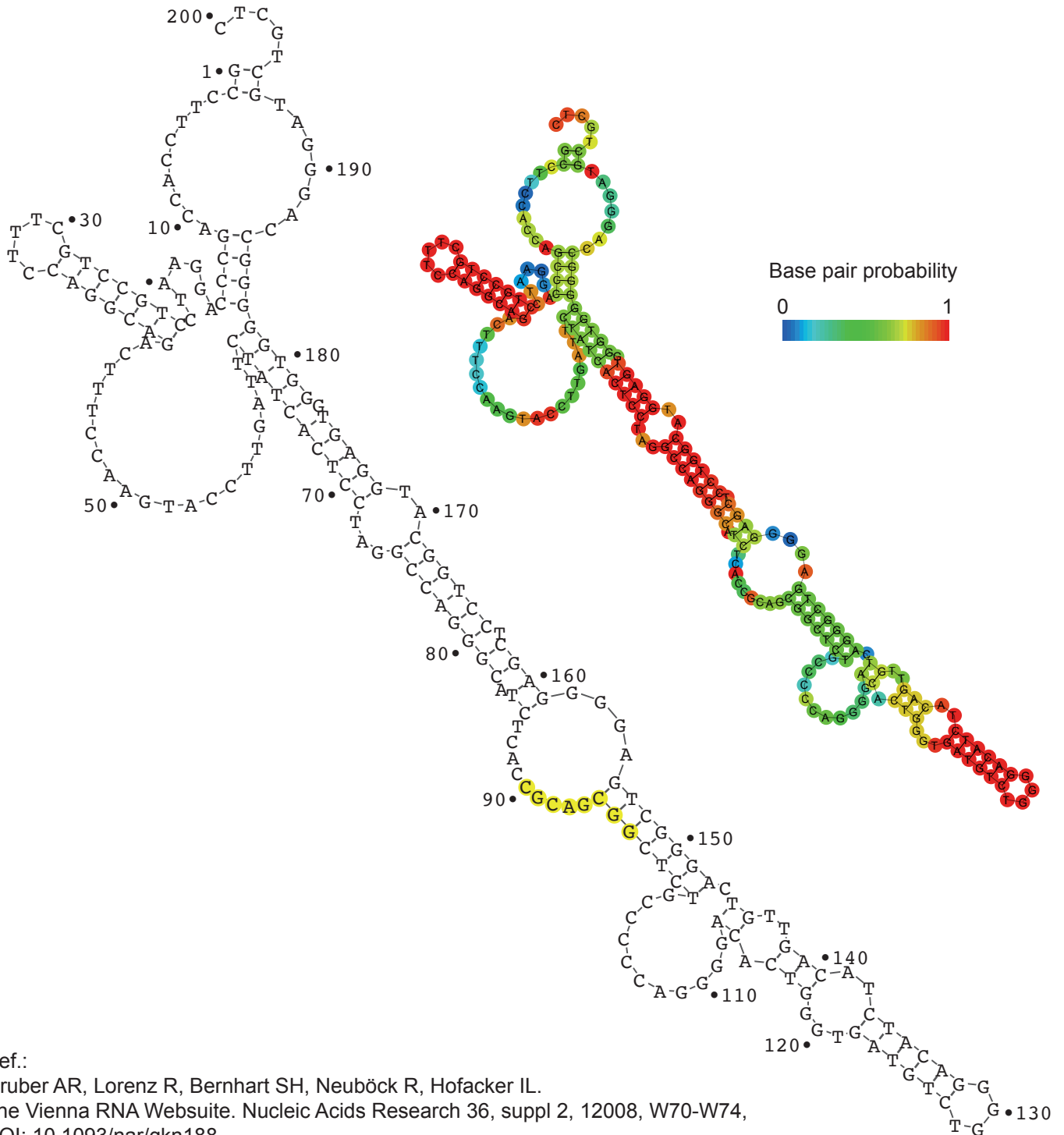
Table S7: Potential cryptic recombination signal sites in *TCF3* intron 16

| # | query | begin | end | type | sequence | orientation |
|----|----------------|-------|------|-------|-----------------------------------------|-------------|
| 1 | TCF3 intron 16 | 68 | 106 | RSS12 | cacggtgacacctgccctgggctcccacctgaccccca | - |
| 2 | TCF3 intron 16 | 391 | 429 | RSS12 | caccacctgtggcctcatgggccaccatctcaagcc | - |
| 3 | TCF3 intron 16 | 538 | 576 | RSS12 | cactctgctccaaccccacgggtcctctggctgttctc | - |
| 4 | TCF3 intron 16 | 865 | 892 | RSS12 | caccctcaagtcctgtccatcacaatc | - |
| 5 | TCF3 intron 16 | 1051 | 1089 | RSS12 | cacagggccaggacagcgcccacaatgacccaccttct | - |
| 6 | TCF3 intron 16 | 1621 | 1659 | RSS12 | cacagtgcaccaatgatcggccactctgattcagc | - |
| 7 | TCF3 intron 16 | 1689 | 1727 | RSS12 | cacgctagtgggacgccgtttcatgaagctcaagaaca | - |
| 8 | TCF3 intron 16 | 1766 | 1804 | RSS12 | cacaatgggaccccagccgctcacaccacacatgtacc | - |
| 9 | TCF3 intron 16 | 2446 | 2484 | RSS12 | caaagtgctgggatcacaggcgtgagtcagccactgtgc | + |
| 10 | TCF3 intron 16 | 2640 | 2678 | RSS12 | cactgtactccagcctgggtgacaaagcaagactccgtc | - |
| 11 | TCF3 intron 16 | 2651 | 2678 | RSS12 | cactgtactccagcctgggtgacaaagc | - |
| 12 | TCF3 intron 16 | 2883 | 2921 | RSS12 | cacagtggctcacaccagctcacacctgtaatgccagca | - |

Figure S8: Two-dimensional DNAfold model of the *TCF3* hotspot region

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1      10      20      30      40      50      60      70      80
•      •      •      •      •      •      •      •      •
GCCTTCCACCAGCCCAGGAATCCTGCCCTGCTTTCCAGGCAGACTTTCCAAGTACCTTGATTCTATCACTCCTAGGCCAGG
81     90     100    110    120    130    140    150    160
•      •      •      •      •      •      •      •      •
GCATCTCACCGCAGCGGCTCTGCCCCAGGGGACACTGGGTGATGTCCTGGGGACATCTACAGTTGTCAGGGCTGAGGGGA
161    170    180    190    200
•      •      •      •      •
GCTCCTGGCATGGAGTGGGTGGGGGCCAGGGATGCTGCTC
    
```



Ref.:
 Gruber AR, Lorenz R, Bernhart SH, Neuböck R, Hofacker IL.
 The Vienna RNA Websuite. *Nucleic Acids Research* 36, suppl 2, 12008, W70-W74,
 DOI: 10.1093/nar/gkn188

Figure S9: Original gel images from Figure 1

