Table S4 Structural variation analysis results

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Samples | Type1 | Type2 | Type3 | ChrA | PosA | OriA | GeneA | Exon\_intronA | ChrB | PosB | OriB | GeneB | Exon\_intronB | Event\_type | Mechanism | Event\_id | Disc\_pair | Split\_read | Homology | Partners |
| 09-323-T | Gene-gene | Head-tail | no\_impact | 20 | 62123292 | 1  | EEF1A2 | I5 | 20 | 62123920 | −1 | EEF1A2 | I5 | del | alt-EJ | 37444\_0 | 4 | 2 | 34 | 3–5 |
| 09-323-T | Gene-gene | Tail-tail |  | 1 | 92610323 | −1 | BTBD8 | I7 | 1 | 92610615 | −1 | BTBD8 | I7 | invers\_r | NA | 39279\_0 | 3 | 9 | -31 | 3–3 |
| 09-323-T | Intergenic-intergenic |  |  | 10 | 30595936 | 1 |  |  | 10 | 30596370 | 1 |  |  | invers\_f | NA | 19386\_0 | 3 | 6 | 21 | – |
| 09-323-T | Gene-gene | Tail-tail |  | 13 | 93353015 | −1 | GPC5 | I7 | 13 | 93353159 | −1 | GPC5 | I7 | invers\_r | NA | 13811 | 4 | 2 | 6 | 3–3 |
| 09-323-T | Intergenic-intergenic |  |  | 9 | 82432525 | −1 |  |  | 9 | 82432733 | −1 |  |  | invers\_r | NA | 6726 | 6 | 1 | 6 | – |
| 09-323-T | Intergenic-intergenic |  |  | 14 | 94985900 | −1 |  |  | 14 | 94986656 | 1 |  |  | tandem\_dup | NA | 5746 | 7 | 1 | 8 | – |
| 09-323-T | Intergenic-intergenic |  |  | 13 | 62363752 | 1 |  |  | 20 | 18333689 | −1 |  |  | transl\_inter | NA | 5390559\_0 | 3 | 3 | 1 | – |
| 09-323-T | Intergenic-intergenic |  |  | 16 | 52906457 | 1 |  |  | 8 | 41019714 | 1 |  |  | transl\_inter | NA | 4739916 | 3 | 3 | 5 | – |
| 09-323-T | Intergenic-intergenic |  |  | 17 | 22205800 | 1 |  |  | 3 | 154203424 | −1 |  |  | transl\_inter | NA | 5339375 | 3 | 3 | 2 | – |
| 09-323-T | Gene-intergenic |  |  | 17 | 60131699 | −1 | MED13 | I2 | X | 113435498 | 1 |  |  | transl\_inter | NA | 5689623 | 3 | 3 | 5 | 5– |
| 09-323-T | Gene-gene | Tail-tail |  | 18 | 34632743 | −1 | KIAA1328 | I6 | 5 | 39182058 | 1 | FYB | I2 | transl\_inter | NA | 5256227 | 3 | 3 | 6 | 3–3 |
| 09-323-T | Gene-gene | Tail-tail |  | 4 | 73274106 | 1 | ADAMTS3 | I4 | 8 | 140878968 | 1 | TRAPPC9 | I21 | transl\_inter | NA | 4929451 | 3 | 3 | 1 | 3–3 |
| 09-323-T | Gene-gene | Head-tail | in\_frame | 7 | 29414509 | −1 | CHN2 | I4 | 9 | 8479528 | −1 | PTPRD | I13 | transl\_inter | NA | 5117110 | 3 | 3 | 9 | 3–5 |
| 09-679-T | Intergenic-intergenic |  |  | 10 | 71897145 | 1 |  |  | 10 | 85048733 | −1 |  |  | del | alt-EJ | 78527\_0 | 3 | 3 | 12 | – |
| 09-679-T | Gene-intergenic |  |  | 12 | 18848513 | 1 | PLCZ1 | I11 | 12 | 33685908 | −1 |  |  | del | alt-EJ | 18537\_0 | 3 | 3 | 2 | 3– |
| 09-679-T | Gene-intergenic |  |  | 16 | 66467988 | 1 | BEAN1 | I1 | 16 | 78110060 | −1 |  |  | del | alt-EJ | 19897 | 3 | 3 | 9 | 5– |
| 09-679-T | Intergenic-intergenic |  |  | 2 | 5138950 | 1 |  |  | 2 | 35501124 | −1 |  |  | del | alt-EJ | 16296 | 3 | 3 | 2 | – |
| 09-679-T | Gene-intergenic |  |  | 9 | 80232633 | 1 | GNA14 | I1 | 9 | 128154643 | −1 |  |  | del | NHEJ | 18777\_0 | 3 | 3 | 1 | 3– |
| 09-679-T | Intergenic-intergenic |  |  | 3 | 35916535 | 1 |  |  | 3 | 191409242 | −1 |  |  | del\_ins | FoSTeS | 8899\_0 | 9 | 1 | -26 | – |
| 09-679-T | Gene-intergenic |  |  | 6 | 1493417 | 1 |  |  | 6 | 57414503 | 1 | PRIM2 | I20 | invers\_f | NA | 873571\_0 | 3 | 3 | 1 | –5 |
| 09-679-T | Intergenic-intergenic |  |  | 14 | 57023620 | −1 |  |  | 14 | 57243229 | −1 |  |  | invers\_r | NA | 20032 | 3 | 3 | 1 | – |
| 09-679-T | Intergenic-intergenic |  |  | 2 | 178130264 | −1 |  |  | 2 | 178130429 | −1 |  |  | invers\_r | NA | 10542 | 4 | 3 | 5 | – |
| 09-679-T | Gene-gene | Tail-tail |  | 8 | 30623179 | −1 | UBXN8 | I8 | 8 | 30623389 | −1 | UBXN8 | I8 | invers\_r | NA | 19141\_0 | 3 | 12 | -5 | 3–3 |
| 09-679-T | Gene-intergenic |  |  | X | 101227189 | −1 |  |  | X | 124061708 | −1 | TENM1 | I1 | invers\_r | NA | 17573\_0 | 3 | 3 | 6 | –5 |
| 09-679-T | Gene-gene | Head-tail | no\_impact | 20 | 20276714 | −1 | CFAP61 | I24 | 20 | 20277066 | 1 | CFAP61 | I24 | tandem\_dup | NA | 113512 | 5 | 1 | 24 | 3–5 |
| 09-679-T | Intergenic-intergenic |  |  | 3 | 68654796 | −1 |  |  | 3 | 150317399 | 1 |  |  | tandem\_dup | NA | 17437\_0 | 3 | 3 | 1 | – |
| 09-679-T | Gene-intergenic |  |  | 1 | 55270527 | −1 |  |  | 7 | 104889579 | −1 | SRPK2 | I2 | transl\_inter | NA | 4130636 | 3 | 3 | 3 | –5 |
| 09-679-T | Gene-intergenic |  |  | 1 | 86558150 | −1 | COL24A1 | I5 | 2 | 159640972 | −1 |  |  | transl\_inter | NA | 3738322 | 3 | 3 | 9 | 5– |
| 09-679-T | Gene-gene | Tail-tail |  | 1 | 92156791 | 1 | TGFBR3 | I17 | 12 | 71194007 | 1 | PTPRR | I2 | transl\_inter | NA | 4462618 | 4 | 2 | 1 | 3–3 |
| 09-679-T | Intergenic-intergenic |  |  | 1 | 155948521 | −1 |  |  | X | 102419464 | −1 |  |  | transl\_inter | NA | 4470520 | 3 | 3 | -20 | – |
| 09-679-T | Gene-intergenic |  |  | 1 | 201778981 | −1 | NAV1 | I22 | 10 | 89796936 | 1 |  |  | transl\_inter | NA | 3767377 | 3 | 3 | 5 | 3– |
| 09-679-T | Intergenic-intergenic |  |  | 1 | 222615424 | −1 |  |  | 7 | 98391295 | 1 |  |  | transl\_inter | NA | 4059309 | 3 | 3 | 1 | – |
| 09-679-T | Gene-intergenic |  |  | 1 | 243985693 | 1 | AKT3 | I1 | 5 | 15176069 | −1 |  |  | transl\_inter | NA | 110403 | 3 | 3 | 1 | 3– |
| 09-679-T | Gene-gene | Head-tail | out\_of\_frame | 1 | 246288380 | −1 | SMYD3 | I5 | 12 | 118377803 | 1 | KSR2 | I1 | transl\_inter | NA | 26104 | 6 | 1 | 20 | 5–3 |
| 09-679-T | Gene-gene | Tail-tail |  | 10 | 7935675 | −1 | TAF3 | I2 | 5 | 20067588 | 1 | CDH18 | I26 | transl\_inter | NA | 4037280 | 3 | 3 | 5 | 3–3 |
| 09-679-T | Gene-intergenic |  |  | 10 | 43974026 | 1 | ZNF487 | I3 | 3 | 136750102 | 1 |  |  | transl\_inter | NA | 3912212 | 3 | 3 | 20 | 5– |
| 09-679-T | Intergenic-intergenic |  |  | 10 | 65559930 | −1 |  |  | 5 | 62468476 | 1 |  |  | transl\_inter | NA | 3937853 | 3 | 3 | 1 | – |
| 09-679-T | Gene-intergenic |  |  | 10 | 86816534 | 1 |  |  | 7 | 50845951 | −1 | GRB10 | I16 | transl\_inter | NA | 4070191 | 3 | 3 | 2 | –5 |
| 09-679-T | Intergenic-intergenic |  |  | 11 | 4533500 | 1 |  |  | 16 | 85306013 | −1 |  |  | transl\_inter | NA | 4232505 | 3 | 3 | 4 | – |
| 09-679-T | Gene-gene | Head-head |  | 11 | 76897981 | 1 | MYO7A | I27 | 3 | 79235872 | −1 | ROBO1 | I2 | transl\_inter | NA | 113349 | 4 | 3 | 4 | 5–5 |
| 09-679-T | Gene-gene | Head-tail | in\_frame | 11 | 77591976 | −1 | INTS4 | I22 | 17 | 2818524 | −1 | RAP1GAP2 | I3 | transl\_inter | NA | 3743438\_0 | 3 | 3 | 6 | 5–3 |
| 09-679-T | Gene-intergenic |  |  | 11 | 108016328 | 1 | ACAT1 | I10 | 20 | 21826759 | 1 |  |  | transl\_inter | NA | 3806301 | 4 | 3 | 0 | 5– |
| 09-679-T | Gene-intergenic |  |  | 11 | 125035775 | 1 | PKNOX2 | I1 | 12 | 38825502 | 1 |  |  | transl\_inter | NA | 4217819 | 3 | 3 | 0 | 5– |
| 09-679-T | Intergenic-intergenic |  |  | 12 | 30729934 | 1 |  |  | 17 | 69606691 | 1 |  |  | transl\_inter | NA | 25643 | 5 | 1 | 14 | – |
| 09-679-T | Gene-gene | Head-tail | out\_of\_frame | 12 | 40253662 | 1 | SLC2A13 | I6 | 18 | 72123489 | −1 | FAM69C | I1 | transl\_inter | NA | 3903449 | 3 | 3 | 9 | 3–5 |
| 09-679-T | Intergenic-intergenic |  |  | 12 | 75973516 | −1 |  |  | 2 | 151716221 | −1 |  |  | transl\_inter | NA | 4142525 | 3 | 3 | 0 | – |
| 09-679-T | Intergenic-intergenic |  |  | 12 | 81339067 | −1 |  |  | 4 | 28159264 | 1 |  |  | transl\_inter | NA | 4403646 | 3 | 3 | 2 | – |
| 09-679-T | Intergenic-intergenic |  |  | 12 | 91980719 | 1 |  |  | 2 | 169289470 | −1 |  |  | transl\_inter | NA | 3802609 | 3 | 3 | 2 | – |
| 09-679-T | Intergenic-intergenic |  |  | 12 | 93121233 | 1 |  |  | 17 | 38614546 | −1 |  |  | transl\_inter | NA | 4446229 | 3 | 3 | 4 | – |
| 09-679-T | Gene-intergenic |  |  | 13 | 23499132 | 1 |  |  | 6 | 122928084 | −1 | PKIB | I4 | transl\_inter | NA | 4040855 | 3 | 3 | 2 | –3 |
| 09-679-T | Gene-gene | Head-tail | unknown | 13 | 33272708 | −1 | PDS5B | I15 | 4 | 108622430 | −1 | PAPSS1 | E2 | transl\_inter | NA | 3853758 | 3 | 3 | 9 | 3–5 |
| 09-679-T | Intergenic-intergenic |  |  | 13 | 36999336 | 1 |  |  | 3 | 116709358 | 1 |  |  | transl\_inter | NA | 3731299 | 4 | 2 | 7 | – |
| 09-679-T | Intergenic-intergenic |  |  | 14 | 29779022 | 1 |  |  | 7 | 128762443 | 1 |  |  | transl\_inter | NA | 4228048 | 3 | 4 | 6 | – |
| 09-679-T | Intergenic-intergenic |  |  | 14 | 30938042 | 1 |  |  | 18 | 22406543 | 1 |  |  | transl\_inter | NA | 3914324 | 3 | 3 | 2 | – |
| 09-679-T | Gene-gene | Head-tail | in\_frame | 14 | 58259275 | −1 | SLC35F4 | I1 | 20 | 16307720 | 1 | KIF16B | I23 | transl\_inter | NA | 26882 | 8 | 1 | -2 | 5–3 |
| 09-679-T | Gene-intergenic |  |  | 14 | 85480460 | −1 |  |  | X | 104171583 | −1 | IL1RAPL2 | I2 | transl\_inter | NA | 4272048 | 3 | 3 | 4 | –3 |
| 09-679-T | Gene-intergenic |  |  | 15 | 65002043 | 1 |  |  | 4 | 79339724 | 1 | FRAS1 | I32 | transl\_inter | NA | 3319667 | 3 | 3 | 5 | –5 |
| 09-679-T | Gene-intergenic |  |  | 15 | 84371009 | 1 | ADAMTSL3 | I2 | 6 | 32640262 | −1 |  |  | transl\_inter | NA | 106649 | 6 | 4 | 2 | 5– |
| 09-679-T | Intergenic-intergenic |  |  | 16 | 64731171 | 1 |  |  | 2 | 149373679 | 1 |  |  | transl\_inter | NA | 4280167 | 3 | 3 | 3 | – |
| 09-679-T | Gene-intergenic |  |  | 16 | 72255895 | −1 |  |  | 18 | 18542683 | 1 | ROCK1 | I27 | transl\_inter | NA | 3967162 | 3 | 3 | 6 | –3 |
| 09-679-T | Gene-gene | Head-tail | UTR\_swap | 16 | 80385117 | 1 | LOC102724084 | I2 | 22 | 26008625 | 1 | ADRBK2 | I2 | transl\_inter | NA | 875146 | 4 | 3 | 9 | 3–5 |
| 09-679-T | Gene-gene | Head-tail | UTR\_swap | 17 | 20862143 | 1 | LOC339260 | I5 | 3 | 79423083 | 1 | ROBO1 | I2 | transl\_inter | NA | 3838451 | 3 | 3 | 2 | 5–3 |
| 09-679-T | Gene-intergenic |  |  | 18 | 51617241 | −1 |  |  | 8 | 105052220 | −1 | RIMS2 | I19 | transl\_inter | NA | 3747446 | 4 | 2 | 11 | –3 |
| 09-679-T | Gene-intergenic |  |  | 19 | 800784 | 1 | PTBP1 | I2 | 4 | 22093835 | −1 |  |  | transl\_inter | NA | 4083749 | 3 | 3 | 0 | 5– |
| 09-679-T | Gene-intergenic |  |  | 19 | 944308 | 1 | ARID3A | I3 | 5 | 8058083 | 1 |  |  | transl\_inter | NA | 4334677 | 3 | 3 | 4 | 5– |
| 09-679-T | Gene-intergenic |  |  | 19 | 28203435 | 1 |  |  | X | 154997434 | −1 | SPRY3 | I1 | transl\_inter | NA | 4222484 | 3 | 4 | 4 | –3 |
| 09-679-T | Intergenic-intergenic |  |  | 2 | 48431903 | 1 |  |  | 21 | 20255650 | −1 |  |  | transl\_inter | NA | 4053319 | 3 | 3 | 6 | – |
| 09-679-T | Gene-gene | Head-tail | UTR\_swap | 2 | 59131431 | 1 | LINC01122 | I3 | 6 | 321277 | −1 | DUSP22 | I3 | transl\_inter | NA | 4272925 | 3 | 3 | 1 | 5–3 |
| 09-679-T | Gene-intergenic |  |  | 2 | 134155076 | 1 | MIR7853 | I1 | 6 | 54665071 | 1 |  |  | transl\_inter | NA | 3762853 | 3 | 3 | 2 | 3– |
| 09-679-T | Gene-intergenic |  |  | 2 | 196555333 | 1 | SLC39A10 | I3 | 7 | 54285198 | 1 |  |  | transl\_inter | NA | 4083385 | 4 | 2 | 8 | 5– |
| 09-679-T | Gene-intergenic |  |  | 2 | 202652609 | −1 |  |  | 4 | 92151500 | 1 | CCSER1 | I10 | transl\_inter | NA | 3945792 | 3 | 3 | 4 | –5 |
| 09-679-T | Gene-intergenic |  |  | 20 | 21323067 | −1 | XRN2 | I15 | 9 | 124139939 | 1 |  |  | transl\_inter | NA | 3950355 | 3 | 3 | 6 | 3– |
| 09-679-T | Intergenic-intergenic |  |  | 20 | 45820868 | 1 |  |  | 6 | 83204080 | 1 |  |  | transl\_inter | NA | 4147085 | 3 | 3 | 6 | – |
| 09-679-T | Gene-intergenic |  |  | 21 | 44209978 | 1 |  |  | 3 | 49345009 | 1 | USP4 | I14 | transl\_inter | NA | 3733793 | 3 | 3 | 15 | –3 |
| 09-679-T | Intergenic-intergenic |  |  | 22 | 48360170 | 1 |  |  | 3 | 29286683 | 1 |  |  | transl\_inter | NA | 4380666\_0 | 3 | 4 | 5 | – |
| 09-679-T | Gene-gene | Head-head |  | 3 | 26717144 | 1 | LRRC3B | I1 | 4 | 170505881 | −1 | NEK1 | I9 | transl\_inter | NA | 3991238\_0 | 3 | 3 | 1 | 5–5 |
| 09-679-T | Gene-intergenic |  |  | 3 | 57614542 | −1 | DENND6A | E19 | Y | 4418990 | −1 |  |  | transl\_inter | NA | 109848 | 3 | 3 | 6 | 5– |
| 09-679-T | Intergenic-intergenic |  |  | 3 | 67334547 | 1 |  |  | 6 | 83342336 | −1 |  |  | transl\_inter | NA | 3976646 | 4 | 3 | 7 | – |
| 09-679-T | Gene-intergenic |  |  | 3 | 113228258 | 1 | SPICE1 | I1 | X | 128442293 | −1 |  |  | transl\_inter | NA | 3784996 | 3 | 3 | 0 | 3– |
| 09-679-T | Gene-intergenic |  |  | 4 | 33606273 | 1 |  |  | 5 | 111053557 | −1 | STARD4-AS1 | I2 | transl\_inter | NA | 4317008 | 3 | 3 | 2 | –3 |
| 09-679-T | Intergenic-intergenic |  |  | 4 | 136065632 | −1 |  |  | X | 40841675 | −1 |  |  | transl\_inter | NA | 3766823 | 3 | 3 | 2 | – |
| 09-679-T | Gene-intergenic |  |  | 4 | 143413717 | 1 | INPP4B | I2 | 5 | 62480755 | −1 |  |  | transl\_inter | NA | 3990547 | 3 | 3 | 3 | 3– |
| 09-679-T | Intergenic-intergenic |  |  | 4 | 149395966 | −1 |  |  | 8 | 55374105 | 1 |  |  | transl\_inter | NA | 4375338 | 3 | 3 | 0 | – |
| 09-679-T | Intergenic-intergenic |  |  | 4 | 177568479 | −1 |  |  | 9 | 1374987 | −1 |  |  | transl\_inter | NA | 3784492 | 4 | 2 | 5 | – |
| 09-679-T | Intergenic-intergenic |  |  | 5 | 23547425 | −1 |  |  | X | 93218900 | 1 |  |  | transl\_inter | NA | 4480575 | 3 | 3 | 6 | – |
| 09-679-T | Gene-intergenic |  |  | 5 | 58798470 | 1 | PDE4D | I1 | 7 | 53122493 | 1 |  |  | transl\_inter | NA | 4164842 | 3 | 3 | 5 | 3– |
| 09-679-T | Intergenic-intergenic |  |  | 5 | 87448709 | 1 |  |  | 7 | 132931503 | −1 |  |  | transl\_inter | NA | 4446152 | 4 | 2 | 7 | – |
| 09-679-T | Gene-intergenic |  |  | 6 | 10508580 | 1 |  |  | 7 | 157425838 | 1 | PTPRN2 | I13 | transl\_inter | NA | 3685783 | 3 | 4 | 12 | –3 |
| 09-679-T | Gene-intergenic |  |  | 6 | 33103987 | 1 |  |  | 8 | 37739566 | 1 | RAB11FIP1 | I1 | transl\_inter | NA | 3853406 | 3 | 3 | 2 | –3 |
| 09-679-T | Gene-gene | Head-tail | in\_frame | 6 | 42986332 | 1 | KLHDC3 | I6 | 7 | 150090196 | −1 | ZNF775 | I2 | transl\_inter | NA | 3883389 | 3 | 3 | 6 | 5–3 |
| 09-679-T | Gene-gene | Head-head |  | 6 | 150227071 | 1 | RAET1E-AS1 | I1 | 7 | 23449205 | −1 | IGF2BP3 | I3 | transl\_inter | NA | 4438604 | 3 | 4 | 1 | 5–5 |
| 09-679-T | Intergenic-intergenic |  |  | 9 | 84855964 | −1 |  |  | X | 90134280 | 1 |  |  | transl\_inter | NA | 109664 | 3 | 3 | 6 | – |
| 11-1060-T | Intergenic-intergenic |  |  | 11 | 38099589 | 1 |  |  | 11 | 38099921 | −1 |  |  | del | alt-EJ | 5254 | 8 | 13 | 26 | – |
| 11-1060-T | Intergenic-intergenic |  |  | 3 | 28167464 | 1 |  |  | 3 | 28167791 | −1 |  |  | del | alt-EJ | 2520 | 15 | 18 | 17 | – |
| 11-1060-T | Gene-gene | Head-head |  | 7 | 18726347 | 1 | HDAC9 | I25 | 7 | 19792487 | −1 | TMEM196 | I1 | del | alt-EJ | 2536 | 15 | 5 | 3 | 5–5 |
| 11-1060-T | Gene-gene | Head-head |  | 2 | 158416809 | −1 | ACVR1C | I2 | 2 | 169671268 | 1 | NOSTRIN | I6 | del\_inssd | FoSTeS | 2739\_0 | 14 | 9 | 1 | 5–5 |
| 11-1060-T | Gene-intergenic |  |  | 2 | 158339876 | 1 |  |  | 2 | 160099454 | −1 | WDSUB1 | I10 | del\_inssd | FoSTeS | 1500\_0 | 22 | 11 | 1 | –5 |
| 11-1060-T | Gene-intergenic |  |  | 11 | 87493025 | 1 |  |  | 11 | 89162260 | −1 | NOX4 | I10 | del\_ins | NHEJ | 9659\_0 | 6 | 1 | -7 | –5 |
| 11-1060-T | Intergenic-intergenic |  |  | 2 | 158095035 | 1 |  |  | 2 | 164314956 | 1 |  |  | invers\_f | NA | 1989\_0 | 18 | 12 | 0 | – |
| 11-1060-T | Gene-gene | Head-tail | in\_frame | 2 | 158419858 | 1 | ACVR1C | I2 | 2 | 160060868 | 1 | TANC1 | I19 | invers\_f | NA | 2330\_0 | 16 | 8 | 1 | 3–5 |
| 11-1060-T | Gene-intergenic |  |  | 2 | 158079603 | −1 |  |  | 2 | 170897431 | −1 | UBR3 | E32 | invers\_r | NA | 4442\_0 | 10 | 3 | 0 | –3 |
| 11-1060-T | Gene-gene | Head-tail | out\_of\_frame | 2 | 158140162 | −1 | GALNT5 | I1 | 2 | 158419095 | −1 | ACVR1C | I2 | invers\_r | NA | 2656 | 17 | 3 | 3 | 3–5 |
| 11-1060-T | Intergenic-intergenic |  |  | 4 | 41897428 | −1 |  |  | 4 | 41897934 | −1 |  |  | invers\_r | NA | 11239 | 4 | 2 | 9 | – |
| 11-1060-T | Intergenic-intergenic |  |  | 11 | 33798660 | −1 |  |  | 11 | 33828872 | 1 |  |  | tandem\_dup | NA | 3633 | 11 | 3 | 1 | – |
| 11-1060-T | Gene-intergenic |  |  | 2 | 158270510 | −1 |  |  | 2 | 158418202 | 1 | ACVR1C | I2 | tandem\_dup | NA | 1394\_0 | 23 | 8 | -4 | –3 |
| 11-1060-T | Gene-gene | Tail-tail |  | 2 | 159885576 | −1 | TANC1 | I2 | 2 | 161016048 | 1 | ITGB6 | I6 | tandem\_dup | NA | 2008\_0 | 18 | 3 | 0 | 3–3 |
| 11-1060-T | Gene-gene | Tail-tail |  | 2 | 159985303 | −1 | TANC1 | I4 | 2 | 160290394 | 1 | BAZ2B | I11 | tandem\_dup | NA | 1724\_0 | 20 | 10 | 2 | 3–3 |
| 11-1060-T | Gene-gene | Head-tail | no\_impact | 4 | 146854482 | −1 | ZNF827 | I1 | 4 | 146855377 | 1 | ZNF827 | I1 | tandem\_dup | NA | 1617 | 21 | 9 | 2 | 5–3 |
| 11-1060-T | Intergenic-intergenic |  |  | 9 | 66840456 | 1 |  |  | GL000199.1 | 24484 | 1 |  |  | transl\_inter | NA | 10401\_0 | 9 | 1 | 15 | – |
| 11-1060-T | Gene-intergenic |  |  | 2 | 164386891 | 1 |  |  | 6 | 45450624 | 1 | RUNX2 | I5 | transl\_inter | NA | 740343 | 18 | 4 | 1 | –5 |
| 11-1060-T | Intergenic-intergenic |  |  | 2 | 164696582 | −1 |  |  | 6 | 45772968 | −1 |  |  | transl\_inter | NA | 3130393 | 32 | 10 | 1 | – |
| 11-1060-T | Gene-intergenic |  |  | 2 | 170994481 | 1 |  |  | 6 | 45433617 | −1 | RUNX2 | I5 | transl\_inter | NA | 9094 | 11 | 5 | 1 | –3 |
| 11-1060-T | Gene-gene | Head-tail | UTR\_swap | 2 | 172048013 | 1 | TLK1 | I1 | 6 | 45433154 | 1 | RUNX2 | I5 | transl\_inter | NA | 16632 | 21 | 10 | 1 | 3–5 |
| 3659-T | Gene-gene | Head-tail | no\_impact | 1 | 27768335 | 1 | WASF2 | I1 | 1 | 27768821 | −1 | WASF2 | I1 | del | alt-EJ | 12358 | 5 | 1 | 9 | 3–5 |
| 3659-T | Gene-gene | Head-tail | no\_impact | 1 | 115052619 | 1 | TRIM33 | I1 | 1 | 115053086 | −1 | TRIM33 | I1 | del | alt-EJ | 4633 | 9 | 5 | 5 | 3–5 |
| 3659-T | Gene-gene | Head-tail | unknown | 1 | 115053459 | 1 | TRIM33 | E1 | 1 | 115157200 | −1 | DENND2C | I8 | del | alt-EJ | 6589 | 7 | 2 | 3 | 3–5 |
| 3659-T | Gene-gene | Head-tail | no\_impact | 2 | 242932153 | 1 | LINC01237 | I3 | 2 | 242932268 | −1 | LINC01237 | I3 | del | alt-EJ | 7783 | 7 | 1 | 31 | 5–3 |
| 3659-T | Gene-gene | Tail-tail |  | 1 | 117204683 | 1 | IGSF3 | I1 | 1 | 120345931 | 1 | REG4 | I2 | del\_insou | FoSTeS | 2799\_0 | 14 | 5 | 2 | 3–3 |
| 3659-T | Gene-gene | Head-head |  | 1 | 115184963 | −1 | DENND2C | I1 | 1 | 120465596 | −1 | NOTCH2 | I48 | del\_insou | FoSTeS | 2780\_0 | 14 | 8 | 1 | 5–5 |
| 3659-T | Gene-gene | Head-tail | UTR\_swap | 1 | 115184013 | −1 | DENND2C | I3 | 1 | 117206433 | 1 | IGSF3 | I2 | del\_inssd | FoSTeS | 3390\_0 | 12 | 4 | 4 | 5–3 |
| 3659-T | Gene-gene | Head-tail | out\_of\_frame | 1 | 115144457 | 1 | DENND2C | I12 | 1 | 117205330 | −1 | IGSF3 | I2 | del\_inssd | FoSTeS | 3108\_0 | 13 | 8 | 1 | 3–5 |
| 3659-T | Gene-gene | Tail-tail |  | 1 | 117309119 | −1 | CD2 | I4 | 1 | 120466127 | 1 | NOTCH2 | I48 | del\_inssu | FoSTeS | 4619\_0 | 9 | 5 | 2 | 3–3 |
| 3659-T | Gene-intergenic |  |  | 1 | 117683918 | 1 |  |  | 1 | 120466305 | −1 | NOTCH2 | E48 | del\_inssu | FoSTeS | 4644\_0 | 9 | 3 | 2 | –5 |
| 3659-T | Gene-intergenic |  |  | 1 | 115079143 | 1 |  |  | 1 | 115185632 | 1 | DENND2C | I1 | invers\_f | NA | 5644\_0 | 10 | 5 | 2 | –3 |
| 3659-T | Gene-gene | Tail-tail |  | 1 | 115123491 | 1 | BCAS2 | I2 | 1 | 115185241 | 1 | DENND2C | I1 | invers\_f | NA | 1684\_0 | 20 | 15 | 0 | 3–3 |
| 3659-T | Gene-intergenic |  |  | 1 | 117311222 | 1 | CD2 | E5 | 1 | 120394958 | 1 |  |  | invers\_f | NA | 4198\_0 | 10 | 7 | 3 | 5– |
| 3659-T | Intergenic-intergenic |  |  | 12 | 21267413 | 1 |  |  | 12 | 21267721 | 1 |  |  | invers\_f | NA | 16223\_0 | 3 | 3 | -16 | – |
| 3659-T | Intergenic-intergenic |  |  | 18 | 32975583 | 1 |  |  | 18 | 32976609 | 1 |  |  | invers\_f | NA | 17359\_0 | 3 | 3 | 6 | – |
| 3659-T | Gene-gene | Tail-tail |  | 8 | 116472267 | 1 | TRPS1 | I5 | 8 | 116472429 | 1 | TRPS1 | I5 | invers\_f | NA | 16534\_0 | 3 | 4 | 9 | 3–3 |
| 3659-T | Gene-intergenic |  |  | 1 | 117671397 | −1 |  |  | 1 | 145291713 | −1 | NBPF25P | I52 | invers\_r | NA | 3955 | 15 | 9 | 0 | –5 |
| 3659-T | Intergenic-intergenic |  |  | 10 | 64873733 | −1 |  |  | 10 | 64874371 | −1 |  |  | invers\_r | NA | 16997 | 3 | 3 | 4 | – |
| 3659-T | Gene-gene | Head-head |  | 2 | 32261749 | −1 | DPY30 | I3 | 2 | 32262550 | −1 | DPY30 | I3 | invers\_r | NA | 8120 | 6 | 1 | 15 | 5–5 |
| 3659-T | Gene-gene | Tail-tail |  | 21 | 22548618 | −1 | NCAM2 | I1 | 21 | 22548861 | −1 | NCAM2 | I1 | invers\_r | NA | 8771 | 5 | 2 | 7 | 3–3 |
| 3659-T | Gene-gene | Head-head |  | 5 | 123404870 | −1 | LINC01170 | I4 | 5 | 123405032 | −1 | LINC01170 | I4 | invers\_r | NA | 16839 | 3 | 3 | 5 | 5–5 |
| 3659-T | Gene-gene | Tail-tail |  | 9 | 132972363 | −1 | NCS1 | I2 | 9 | 132973418 | −1 | NCS1 | I2 | invers\_r | NA | 57257 | 4 | 2 | 12 | 3–3 |
| 3659-T | Gene-gene | Head-tail | out\_of\_frame | 1 | 115052348 | −1 | TRIM33 | I1 | 1 | 120465579 | 1 | NOTCH2 | I26 | tandem\_dup | NA | 4177\_0 | 10 | 3 | 1 | 5–3 |
| 3659-T | Intergenic-intergenic |  |  | 2 | 160939351 | −1 |  |  | 2 | 186830692 | 1 |  |  | tandem\_dup | NA | 62295\_0 | 4 | 4 | -20 | – |
| 3659-T | Gene-intergenic |  |  | 10 | 19632637 | −1 | MALRD1 | I24 | 5 | 25985566 | 1 |  |  | transl\_inter | NA | 3224085\_0 | 3 | 3 | 8 | 3– |
| 3659-T | Gene-intergenic |  |  | 1 | 9382546 | 1 | SPSB1 | I1 | 7 | 10572201 | 1 |  |  | transl\_inter | NA | 3270614 | 3 | 3 | 0 | 5– |
| 3659-T | Gene-intergenic |  |  | 1 | 29802833 | −1 |  |  | 2 | 214479639 | 1 | SPAG16 | I15 | transl\_inter | NA | 3807657 | 3 | 3 | 2 | –5 |
| 3659-T | Gene-gene | Tail-tail |  | 1 | 65456138 | 1 | LINC01359 | I3 | 2 | 51621692 | −1 | LOC730100 | I4 | transl\_inter | NA | 3363070 | 3 | 3 | 9 | 3–3 |
| 3659-T | Gene-intergenic |  |  | 1 | 101342213 | −1 | EXTL2 | I5 | 15 | 65821706 | 1 |  |  | transl\_inter | NA | 3976257 | 3 | 3 | 1 | 5– |
| 3659-T | Intergenic-intergenic |  |  | 1 | 166228445 | 1 |  |  | 22 | 37428370 | 1 |  |  | transl\_inter | NA | 3242276 | 3 | 3 | 5 | – |
| 3659-T | Gene-intergenic |  |  | 1 | 173602114 | 1 | ANKRD45 | I3 | 4 | 101647172 | −1 |  |  | transl\_inter | NA | 3795445 | 3 | 3 | 0 | 3– |
| 3659-T | Gene-intergenic |  |  | 1 | 180365409 | 1 | ACBD6 | I6 | 7 | 153536579 | 1 |  |  | transl\_inter | NA | 3551483 | 3 | 5 | 3 | 3– |
| 3659-T | Intergenic-intergenic |  |  | 1 | 192026821 | −1 |  |  | 7 | 96731092 | 1 |  |  | transl\_inter | NA | 3250054 | 3 | 3 | 0 | – |
| 3659-T | Gene-gene | Head-tail | in\_frame | 1 | 229593684 | 1 | NUP133 | I21 | 9 | 15968210 | 1 | CCDC171 | I25 | transl\_inter | NA | 3769811 | 3 | 3 | 0 | 3–5 |
| 3659-T | Gene-intergenic |  |  | 10 | 58943658 | 1 |  |  | 5 | 33704401 | −1 | ADAMTS12 | I3 | transl\_inter | NA | 3386726 | 3 | 3 | -2 | –5 |
| 3659-T | Gene-intergenic |  |  | 10 | 83006452 | 1 |  |  | 7 | 49853714 | 1 | VWC2 | I3 | transl\_inter | NA | 3292243 | 3 | 3 | 5 | –5 |
| 3659-T | Gene-gene | Head-head |  | 11 | 9869014 | 1 | LOC101928008 | I1 | 3 | 132374233 | 1 | UBA5 | I1 | transl\_inter | NA | 3243988\_0 | 3 | 3 | 0 | 5–5 |
| 3659-T | Gene-intergenic |  |  | 11 | 41936544 | 1 |  |  | 4 | 148416611 | 1 | EDNRA | I2 | transl\_inter | NA | 3392364 | 3 | 3 | 8 | –5 |
| 3659-T | Gene-gene | Tail-tail |  | 11 | 101815630 | −1 | CEP126 | I3 | 4 | 123131559 | −1 | KIAA1109 | I17 | transl\_inter | NA | 3592947 | 3 | 3 | 5 | 3–3 |
| 3659-T | Intergenic-intergenic |  |  | 11 | 109591128 | 1 |  |  | 14 | 43645792 | 1 |  |  | transl\_inter | NA | 3431477 | 3 | 3 | 6 | – |
| 3659-T | Intergenic-intergenic |  |  | 11 | 124343589 | 1 |  |  | 6 | 91377165 | −1 |  |  | transl\_inter | NA | 3899622 | 3 | 3 | 0 | – |
| 3659-T | Gene-intergenic |  |  | 12 | 63353693 | 1 |  |  | 7 | 18629949 | −1 | HDAC9 | I5 | transl\_inter | NA | 3184831\_0 | 3 | 3 | 2 | –3 |
| 3659-T | Intergenic-intergenic |  |  | 12 | 113174589 | 1 |  |  | 6 | 112638807 | −1 |  |  | transl\_inter | NA | 3440307\_0 | 3 | 3 | 11 | – |
| 3659-T | Intergenic-intergenic |  |  | 13 | 54262710 | −1 |  |  | 4 | 65987906 | 1 |  |  | transl\_inter | NA | 3863589 | 3 | 3 | 5 | – |
| 3659-T | Intergenic-intergenic |  |  | 13 | 71223594 | 1 |  |  | 7 | 91067248 | 1 |  |  | transl\_inter | NA | 3304811 | 3 | 3 | 7 | – |
| 3659-T | Intergenic-intergenic |  |  | 13 | 109213424 | 1 |  |  | 5 | 161784601 | −1 |  |  | transl\_inter | NA | 4109787 | 3 | 3 | 5 | – |
| 3659-T | Gene-intergenic |  |  | 15 | 48852827 | 1 | FBN1 | I6 | 4 | 109138824 | −1 |  |  | transl\_inter | NA | 3654076 | 3 | 3 | 5 | 3– |
| 3659-T | Intergenic-intergenic |  |  | 15 | 91901131 | 1 |  |  | 7 | 7664671 | 1 |  |  | transl\_inter | NA | 3319662 | 3 | 3 | 4 | – |
| 3659-T | Gene-intergenic |  |  | 16 | 12116786 | 1 | SNX29 | I3 | 17 | 43264635 | 1 |  |  | transl\_inter | NA | 3759952 | 3 | 3 | 15 | 5– |
| 3659-T | Intergenic-intergenic |  |  | 16 | 62562270 | −1 |  |  | 9 | 21774781 | −1 |  |  | transl\_inter | NA | 3379663 | 3 | 3 | 0 | – |
| 3659-T | Gene-gene | Head-tail | UTR\_swap | 16 | 65491249 | 1 | LINC00922 | I2 | 3 | 107894949 | −1 | IFT57 | I6 | transl\_inter | NA | 3330952 | 3 | 3 | 7 | 3–5 |
| 3659-T | Gene-intergenic |  |  | 17 | 54723429 | −1 |  |  | X | 66893688 | 1 | AR | I2 | transl\_inter | NA | 3259608 | 3 | 3 | 7 | –5 |
| 3659-T | Gene-intergenic |  |  | 18 | 56568190 | 1 | ZNF532 | I2 | 7 | 33892430 | −1 |  |  | transl\_inter | NA | 4059256 | 3 | 3 | 6 | 5– |
| 3659-T | Intergenic-intergenic |  |  | 18 | 62414509 | 1 |  |  | 8 | 135344947 | −1 |  |  | transl\_inter | NA | 3906189\_0 | 3 | 3 | 9 | – |
| 3659-T | Gene-intergenic |  |  | 2 | 27810981 | 1 | ZNF512 | I2 | 4 | 18869965 | −1 |  |  | transl\_inter | NA | 3846908 | 3 | 3 | 8 | 5– |
| 3659-T | Gene-intergenic |  |  | 2 | 29085330 | 1 | TRMT61B | I2 | 6 | 26215203 | −1 |  |  | transl\_inter | NA | 3462224 | 3 | 4 | 7 | 3– |
| 3659-T | Gene-gene | Head-tail | in\_frame | 2 | 45953315 | −1 | PRKCE | I1 | 8 | 69342745 | 1 | C8orf34 | I1 | transl\_inter | NA | 3542200 | 3 | 3 | 2 | 3–5 |
| 3659-T | Gene-intergenic |  |  | 2 | 69663592 | −1 | NFU1 | I1 | 7 | 49384901 | 1 |  |  | transl\_inter | NA | 3824770 | 4 | 2 | 7 | 5– |
| 3659-T | Intergenic-intergenic |  |  | 2 | 139945436 | 1 |  |  | 4 | 29243269 | −1 |  |  | transl\_inter | NA | 3551656 | 3 | 3 | 0 | – |
| 3659-T | Gene-intergenic |  |  | 3 | 49215114 | −1 | C3orf84 | E4 | 8 | 80182870 | −1 |  |  | transl\_inter | NA | 3205697 | 3 | 3 | 0 | 5– |
| 3659-T | Gene-gene | Head-head |  | 3 | 96621813 | 1 | EPHA6 | I2 | 8 | 130791852 | −1 | GSDMC | I1 | transl\_inter | NA | 3339025 | 3 | 3 | 0 | 5–5 |
| 3659-T | Intergenic-intergenic |  |  | 3 | 103337103 | −1 |  |  | 4 | 179608864 | −1 |  |  | transl\_inter | NA | 3427316 | 3 | 3 | 4 | – |
| 3659-T | Intergenic-intergenic |  |  | 4 | 9100893 | −1 |  |  | X | 75675226 | 1 |  |  | transl\_inter | NA | 62129 | 3 | 3 | 6 | – |
| 3659-T | Gene-intergenic |  |  | 4 | 113808168 | 1 | ANK2 | I1 | 5 | 103479237 | 1 |  |  | transl\_inter | NA | 3712563 | 3 | 3 | 0 | 5– |
| 3659-T | Intergenic-intergenic |  |  | 4 | 134891327 | 1 |  |  | 8 | 67468401 | 1 |  |  | transl\_inter | NA | 3911876 | 3 | 3 | 12 | – |
| 3659-T | Gene-intergenic |  |  | 4 | 150200246 | −1 |  |  | 6 | 52438028 | −1 | TRAM2 | I1 | transl\_inter | NA | 3569195 | 3 | 3 | 0 | –5 |
| 3659-T | Intergenic-intergenic |  |  | 6 | 50821549 | 1 |  |  | 9 | 25343823 | 1 |  |  | transl\_inter | NA | 3761958 | 3 | 3 | 6 | – |
| 3659-T | Intergenic-intergenic |  |  | 7 | 8993983 | 1 |  |  | 8 | 137040980 | −1 |  |  | transl\_inter | NA | 3803744 | 3 | 3 | 4 | – |
| 3659-T | Gene-intergenic |  |  | 7 | 81855069 | −1 | CACNA2D1 | I3 | 8 | 103204561 | −1 |  |  | transl\_inter | NA | 4039048 | 3 | 3 | 3 | 5– |
| 3659-T | Intergenic-intergenic |  |  | 9 | 12954035 | −1 |  |  | X | 115946518 | −1 |  |  | transl\_inter | NA | 3578570 | 3 | 3 | 3 | – |
| 3659-T | Intergenic-intergenic |  |  | 9 | 91501411 | −1 |  |  | X | 44603942 | −1 |  |  | transl\_inter | NA | 4031472 | 6 | 3 | 6 | – |