**Supplementary table 2 Summary of SNPs and Indels for each sample of IV-1 and IV-2 in this family.**

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| --- | --- | --- |
| Sample ID | IV-1 | IV-2 (proband) |
| Total SNPs | 106662 | 105523 |
| Heterozygous SNPs | 55762 | 54634 |
| Homozygous SNPs | 50900 | 50889 |
| Synonymous variant | 10133 | 10170 |
| Missense variant | 10453 | 10439 |
| Stop gained | 127 | 141 |
| Stop lost | 59 | 58 |
| Splice region variant | 2069 | 2065 |
| Intergenic variant | 205 | 217 |
| Intron variant | 64777 | 63693 |
| Total INDELs | 20952 | 20207 |
| Heterozygous INDELs | 12524 | 11880 |
| Homozygous INDELs | 8428 | 8327 |
| Frameshift variant | 517 | 516 |
| Inframe-insertion | 190 | 184 |
| Inframe-deletion | 183 | 200 |
| Stop gained | 6 | 7 |
| Splice region variant | 561 | 558 |
| Intergenic variant | 120 | 105 |
| Intron variant | 15672 | 15025 |

Note:

(1) For SNPs, stopgain means that a nonsynonymous SNV that lead to the immediate creation of stop codon at the variant site. Meanwhile stoploss means that lead to the immediate elimination of stop codon at the variant site.(2) Splicing is defined as variant that is within 2-bp away from an exon/intron boundary.(3) Frameshift mutation means that an insertion/deletion of one or more nucleotides that cause frameshift changes in protein coding sequence.(4) inframeshift mutation means that an insertion/deletion of 3 or multiples of 3 nucleotides that do not cause frameshift changes in protein coding sequence.(5) For Indels, stopgain means that a frameshift insertion/deletion, nonframeshiftinsertion/deletion or block substitution that lead to the immediate creation of stop codon at the variant site.

(6) For frameshift mutations, the creation of stop codon downstream of the variant will not be counted as "stopgain". Meanwhile stoploss means that lead to the immediate elimination of stop codon at the variant site.