|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **SV ID** | **SV length** | **LRS** | ***P*-value** | **Ancestry component** | **Affected gene(s)** |
| 27407\_HG02106\_ins | 44 | 124.3 | 2.74 x 10-23 | 1 |  |
| 1737\_HG02106\_del | 3490 | 58.5 | 7.69 x 10-9 | 1 | *LINC01680* |
| 11915\_HG01352\_ins | 397 | 45.0 | 7.28 x 10-6 | 1 | *KDM2A* |
| **22237\_HG02059\_ins** | **34** | **513.0** | **5.34 x 10-108** | **2** | ***IGHG4*** |
| **22231\_HG02059\_del** | **135** | **488.1** | **1.42 x 10-102** | **2** |  |
| 25871\_AK1\_del | 37 | 113.7 | 5.77 x 10-21 | 2 |  |
| 32021\_HG00268\_ins | 84 | 98.9 | 1.02 x 10-17 | 3 | *PCNT* |
| 2181\_CHM1\_ins | 309 | 84.6 | 1.36 x 10-14 | 3 | *TMEM131* |
| 1731\_NA12878\_ins | 395 | 82.2 | 4.57 x 10-14 | 3 | *LRP1B* |
| 22065\_HG02106\_del | 186 | 481.1 | 4.67 x 10-101 | 4 |  |
| 25687\_HG02106\_ins | 2886 | 468.6 | 2.39 x 10-98 | 4 | *CLEC16A* |
| 5843\_HG02106\_del | 32 | 377.3 | 1.82 x 10-78 | 4 |  |
| 21859\_NA19240\_ins | 36 | 159.1 | 6.70 x 10-31 | 5 | *AC135050.3* |
| 25014\_HG02106\_del | 325 | 133.4 | 2.80 x 10-25 | 5 | *CSNK1G1, AC087632.2* |
| 21191\_NA19240\_del | 110 | 122.1 | 8.12 x 10-23 | 5 | *AC087632.2, PCLAF* |
| **22237\_HG02059\_ins** | **34** | **212.2** | **1.73 x 10-42** | **6** | ***IGHG4*** |
| 658\_HX1\_ins | 445 | 137.6 | 3.42 x 10-26 | 6 |  |
| **22231\_HG02059\_del** | **135** | **135.9** | **7.80 x 10-26** | **6** |  |
| 10085\_HG00268\_del | 52 | 116.6 | 1.31 x 10-21 | 7 |  |
| 18105\_NA19240\_ins | 3096 | 107.7 | 1.21 x 10-19 | 7 |  |
| 23087\_CHM13\_del | 34 | 102.3 | 1.78 x 10-18 | 7 | *PSMC3IP* |
| 18075\_HG00268\_del | 167 | 85.6 | 8.43 x 10-15 | 8 | *PLXDC2* |
| 9365\_CHM1\_ins | 4417 | 83.9 | 1.99 x 10-14 | 8 | *CLVS1* |
| 14974\_NA19434\_ins | 337 | 63.6 | 5.64 x 10-10 | 8 | *OR10G3* |

**Supplementary File 1.** Highly differentiated SV loci across ancestry components. The top three SVs per ancestry component are reported. The *IGH* insertion and deletion are highlighted in bold text.

­­­­