

Table S2. Prioritized frameshift variants found in teratozoospermic individuals. Variants not found in the 1000 Genomes Project are highlighted because they were also searched in the gnomAD database. Ref; Reference allele, Obs; Observed allele

| Variant | Location | Gene | Ref | Obs | Frequency (Europe) |
|--------------|------------------------|-----------------|---|---|-------------------------------|
| rs374993061 | 20:29965207-29965211 | <i>DEFB119</i> | ACTG | - | 0.0000 |
| rs746234865 | 12:117289581-117289602 | <i>RNFT2</i> | AGGAA GGAA | AGGAAG GAAGGA AGGAA | 0.0000 (gnomAD) |
| rs570740564 | 17:29626554-29626555 | <i>NF1</i> | T | - | 0.0000 (gnomAD) |
| rs2231925 | 3:73111724-73111724 | <i>EBLN2</i> | T | G | 0.0100 |
| rs768887632 | 14:22924269-22924270 | <i>TRDJ4</i> | T | - | 0.0001 (gnomAD) |
| rs762035521 | 7:143095834-143095850 | <i>EPHA1</i> | GCCCCC GGGCC CCCGG | GCCCCCG GGCCCCC GGGCC CCGG | 0.0010 (gnomAD genomes) |
| rs774160685 | 4:42461515-42461518 | <i>ATP8A1</i> | TGT | T | 0.0020 (gnomAD) |
| rs139270644 | 7:44118249-44118251 | <i>POLM</i> | CT | - | 0.0020 |
| rs540318536 | 22:39176877-39176878 | <i>DNAL4</i> | C | - | 0.0030 |
| rs534542684 | 14:58899156-58899157 | <i>KIAA0586</i> | G | - | 0.0070 |
| rs529180941 | 19:23328751-23328752 | <i>ZNF730</i> | T | TT | 0.0070 |
| rs66858778 | 19:49619102-49619103 | <i>LIN7B</i> | G | - | 0.0000 (gnomAD) |
| rs150536607 | 8:17137320-17137322 | <i>VPS37A</i> | TA | - | 0.0230 |
| rs144060127 | 9:27524364-27524371 | <i>IFNK</i> | TGTTTG T | TGTTTGT TTGT | 0.0300 |
| rs141244584 | 5:40841571-40841573 | <i>CARD6</i> | TT | - | 0.0320 |
| rs142551217 | 8:10411512-10411515 | <i>PRSS55</i> | GGG | GG | 0.0360 |
| - | 3:12942848-12942850 | <i>IQSEC1</i> | GG | G | - |
| - | 8:98788168-98788183 | <i>LAPTM4B</i> | GGGCT CCAGG CGAGG | GGGCTCC AGGCGA GGAGGG CTCCAGG CGAGG | - |
| - | 14:22591984-22591990 | <i>TRAV26-1</i> | CCCCCC | CCCCCCC | - |
| rs1567262786 | 16:3779217-3779219 | <i>CREBBP</i> | CC | CCC | - |
| - | 16:89952390-89952453 | <i>TCF25</i> | TCTCTG CGGCT GCCCTT CTCTGC GGCTG CCCTTC TCTGCG GCTGCC CTTCTC TGCGG CTGCCC | TCTCTGC GGCTGCC CGTCTCT GCGGCTG CCCTTCT CTGCGGC TGCCCTT CTCTGCG GCTGCCC TTCTCTG CGGCTGC CC | - |
| - | 17:6945529-6945548 | <i>SLC16A11</i> | CACAG CCCCA | CA | - |

| | | | | | |
|---|----------------------|------|-------|-----|---|
| | | | GCCCA | | |
| | | | GTCA | | |
| - | 17:79995492-79995493 | DCXR | T | TGT | - |
