

**Supplementary Table 1.**

**OMIM morbid genes in genomic coordinates Chr19: 275925-7660356 and DDG2P classification**

| #  | Gene            | Description                                                         | DDG2P    |
|----|-----------------|---------------------------------------------------------------------|----------|
| 1  | <i>ABCA7</i>    | ATP binding cassette subfamily A member 7.                          | -        |
| 2  | <i>ADAT3</i>    | Adenosine deaminase tRNA specific 3                                 | -        |
| 3  | <i>AMH</i>      | Anti-Mullerian hormone                                              | -        |
| 4  | <i>AP3D1</i>    | Adaptor related protein complex 3 subunit delta 1                   | -        |
| 5  | <i>APC2</i>     | APC regulator of WNT signaling pathway 2                            | <b>P</b> |
| 6  | <i>ARHGEF18</i> | Rho/Rac guanine nucleotide exchange factor 18                       | -        |
| 7  | <i>ATCAY</i>    | ATCAY kinesin light chain interacting caytaxin                      | -        |
| 8  | <i>ATP5D</i>    | ATP synthase F1 subunit delta                                       | <b>P</b> |
| 9  | <i>BSG</i>      | Basigin                                                             | -        |
| 10 | <i>C19orf70</i> | Mitochondrial contact site and cristae organizing system subunit 13 | -        |
| 11 | <i>C3</i>       | Complement C3                                                       | -        |
| 12 | <i>CD70</i>     | CD70 molecule                                                       | -        |
| 13 | <i>CFD</i>      | Complement factor D                                                 | -        |
| 14 | <i>CLPP</i>     | Caseinolytic mitochondrial matrix peptidase proteolytic subunit     | <b>P</b> |
| 15 | <i>EEF2</i>     | Eukaryotic translation elongation factor 2                          | -        |
| 16 | <i>ELANE</i>    | Elastase, neutrophil expressed                                      | -        |
| 17 | <i>FUT3</i>     | Fucosyltransferase 3                                                | -        |
| 18 | <i>FUT6</i>     | Fucosyltransferase 6                                                | -        |
| 19 | <i>GAMT</i>     | Guanidinoacetate N-methyltransferase                                | <b>Y</b> |
| 20 | <i>GIPC3</i>    | GIPC PDZ domain containing family member 3                          | -        |
| 21 | <i>GNA11</i>    | G protein subunit alpha 11                                          | <b>P</b> |
| 22 | <i>GPX4</i>     | Glutathione peroxidase 4                                            | <b>P</b> |
| 23 | <i>INSR</i>     | Insulin receptor                                                    | -        |
| 24 | <i>KISS1R</i>   | KISS1 receptor                                                      | -        |
| 25 | <i>LMNB2</i>    | Lamin B2                                                            | -        |
| 26 | <i>LONP1</i>    | Ion peptidase 1, mitochondrial                                      | <b>P</b> |
| 27 | <i>MAP2K2</i>   | Mitogen-activated protein kinase kinase 2                           | <b>Y</b> |
| 28 | <i>MCOLN1</i>   | Mucolipin 1                                                         | <b>Y</b> |
| 29 | <i>NDUFA11</i>  | NADH: ubiquinone oxidoreductase core subunit A11                    | -        |
| 30 | <i>NDUFS7</i>   | NADH:ubiquinone oxidoreductase core subunit S7                      | <b>Y</b> |
| 31 | <i>PIP5K1C</i>  | Phosphatidylinositol-4-phosphate 5-kinase type 1 gamma              | -        |
| 32 | <i>PNPLA6</i>   | Patatin like phospholipase domain containing 6                      | -        |
| 33 | <i>RAX2</i>     | Retina and anterior neural fold homeobox 2                          | -        |
| 34 | <i>REEP6</i>    | Receptor accessory protein 6                                        | -        |
| 35 | <i>SH3GL1</i>   | SH3 domain containing GRB2 like 1, endophilin A2                    | -        |
| 36 | <i>STK11</i>    | Serine/threonine kinase 11                                          | -        |
| 37 | <i>TBXA2R</i>   | Thromboxane A2 receptor                                             | -        |
| 38 | <i>TCF3</i>     | Transcription factor 3                                              | -        |
| 39 | <i>TICAM1</i>   | Toll like receptor adaptor molecule 1                               | -        |
| 40 | <i>TLE6</i>     | TLE family member 6, subcortical maternal complex member            | -        |
| 41 | <i>TUBB4A</i>   | Tubulin beta 4A class IVa                                           | <b>Y</b> |

DDG2P: Developmental disorder genotype-phenotype database classification

**P:** The gene is probably associated with developmental disorders

**Y:** The gene is confirmed as causing developmental disorder in multiple un related cases