

# WES HEARING IMPAIRMENT DG 3.4

| <i>Gene</i> | <i>Median coverage</i> | <i>% covered &gt;10x</i> | <i>% covered &gt;20x</i> | <i>OMIM disease ID</i> |
|-------------|------------------------|--------------------------|--------------------------|------------------------|
| ABCC1       | 226.1                  | 100.0                    | 100.0                    | -                      |
| ABHD12      | 142.8                  | 100.0                    | 100.0                    | 612674                 |
| ACTB        | 292.9                  | 100.0                    | 100.0                    | 243310;607371          |
| ACTG1       | 270.4                  | 100.0                    | 100.0                    | 614583;604717          |
| ADAMTS1     | 209.0                  | 100.0                    | 100.0                    | No OMIM phenotype      |
| ADCY1       | 191.4                  | 99.3                     | 98.9                     | 610154                 |
| ADGRV1      | 163.1                  | 100.0                    | 100.0                    | 605472                 |
| AIFM1       | 148.8                  | 100.0                    | 100.0                    | 300614                 |
| ALMS1       | 196.0                  | 100.0                    | 100.0                    | 203800                 |
| AMMECR1     | 155.9                  | 100.0                    | 100.0                    | 300990                 |
| ANLN        | 153.5                  | 100.0                    | 100.0                    | No OMIM phenotype      |
| AP1B1       | 176.8                  | 100.0                    | 100.0                    | 242150                 |
| ARSG        | 159.9                  | 100.0                    | 100.0                    | 618144                 |
| ATOH1       | 249.9                  | 100.0                    | 100.0                    | No OMIM phenotype      |
| ATP1A3      | 194.6                  | 100.0                    | 100.0                    | -                      |
| ATP2B2      | 189.5                  | 100.0                    | 100.0                    | -                      |
| ATP6V0A4    | 155.6                  | 100.0                    | 100.0                    | 602722                 |
| ATP6V1B1    | 167.2                  | 100.0                    | 100.0                    | 267300                 |
| ATP6V1B2    | 148.6                  | 100.0                    | 100.0                    | 124480                 |
| BCAP31      | 151.5                  | 100.0                    | 100.0                    | 300475                 |
| BCS1L       | 186.9                  | 100.0                    | 100.0                    | 262000                 |
| BDP1        | 219.9                  | 100.0                    | 100.0                    | 618257                 |
| BMP4        | 222.6                  | 100.0                    | 100.0                    | -                      |
| BSND        | 200.5                  | 100.0                    | 100.0                    | 602522                 |
| BTD         | 176.4                  | 83.1                     | 83.1                     | 253260                 |

|          |       |       |       |                                    |
|----------|-------|-------|-------|------------------------------------|
| CABP2    | 240.8 | 100.0 | 100.0 | 614899                             |
| CACNA1D  | 168.7 | 100.0 | 100.0 | 614896                             |
| CCDC50   | 156.8 | 100.0 | 100.0 | 607453                             |
| CD151    | 200.0 | 100.0 | 100.0 | 609057                             |
| CD164    | 174.4 | 100.0 | 100.0 | 616969                             |
| CDC14A   | 155.3 | 100.0 | 100.0 | 616958                             |
| CDC42    | 137.2 | 100.0 | 100.0 | 616737                             |
| CDH23    | 181.9 | 100.0 | 100.0 | 601067;601386                      |
| CEACAM16 | 222.2 | 100.0 | 100.0 | 614614                             |
| CEP250   | 178.7 | 100.0 | 100.0 | 618358                             |
| CEP78    | 150.6 | 100.0 | 100.0 | 617236                             |
| CHD7     | 185.7 | 100.0 | 100.0 | 214800                             |
| CHSY1    | 195.8 | 100.0 | 99.9  | 605282                             |
| CIB2     | 194.8 | 100.0 | 100.0 | 614869;609439                      |
| CISD2    | 149.7 | 100.0 | 100.0 | 604928                             |
| CLDN14   | 218.3 | 100.0 | 100.0 | 614035                             |
| CLDN9    | 235.3 | 100.0 | 100.0 | -                                  |
| CLIC5    | 175.9 | 100.0 | 100.0 | 616042                             |
| CLPP     | 190.0 | 100.0 | 100.0 | 614129                             |
| CLRN1    | 192.3 | 100.0 | 100.0 | 276902                             |
| CLRN2    | 196.0 | 100.0 | 100.0 | 618988                             |
| COA8     | 167.2 | 93.5  | 93.5  | 220110                             |
| COCH     | 175.1 | 100.0 | 100.0 | 601369                             |
| COL11A1  | 149.2 | 100.0 | 100.0 | 154780;604841                      |
| COL11A2  | 274.6 | 100.0 | 100.0 | 184840;609706;277610;601868;215150 |
| COL2A1   | 179.8 | 100.0 | 100.0 | 215150;108300;132450;156550        |
| COL4A3   | 159.9 | 100.0 | 100.0 | 203780;104200                      |
| COL4A4   | 172.8 | 100.0 | 100.0 | 203780                             |
| COL4A5   | 154.8 | 100.0 | 100.0 | 301050                             |
| COL4A6   | 167.1 | 100.0 | 100.0 | 300914                             |

|        |       |       |       |                      |
|--------|-------|-------|-------|----------------------|
| COL9A1 | 162.2 | 100.0 | 100.0 | 614134               |
| COL9A2 | 190.8 | 100.0 | 100.0 | 614284               |
| COL9A3 | 204.3 | 100.0 | 100.0 | -                    |
| CRYL1  | 159.5 | 100.0 | 100.0 | -                    |
| CRYM   | 177.7 | 100.0 | 100.0 | 616357               |
| DCAF17 | 141.7 | 100.0 | 100.0 | 241080               |
| DCDC2  | 173.8 | 100.0 | 100.0 | 610212               |
| DIABLO | 160.6 | 100.0 | 100.0 | 614152               |
| DIAPH1 | 155.5 | 100.0 | 100.0 | 124900               |
| DIAPH3 | 145.8 | 100.0 | 100.0 | 609129               |
| DLL1   | 302.1 | 100.0 | 100.0 | -                    |
| DLX5   | 205.4 | 100.0 | 100.0 | 183600;220600        |
| DMXL2  | 164.5 | 100.0 | 100.0 | 617605               |
| DSPP   | 305.9 | 100.0 | 100.0 | 605594               |
| EDN3   | 212.0 | 100.0 | 100.0 | 613265               |
| EDNRB  | 174.5 | 100.0 | 100.0 | 277580;600501        |
| EFNB2  | 186.5 | 100.0 | 100.0 | -                    |
| EHD1   | 238.4 | 100.0 | 100.0 | No OMIM phenotype    |
| ELMOD3 | 177.3 | 100.0 | 100.0 | 615429               |
| ELOVL1 | 166.3 | 100.0 | 100.0 | 618527               |
| EPS8   | 164.4 | 100.0 | 100.0 | 615974               |
| EPS8L2 | 178.6 | 88.0  | 88.0  | 617637               |
| ERAL1  | 171.6 | 100.0 | 100.0 | 617565               |
| ESPN   | 195.9 | 100.0 | 100.0 | 609006               |
| ESRP1  | 163.7 | 100.0 | 100.0 | 618013               |
| ESRRB  | 204.8 | 100.0 | 100.0 | 608565               |
| EXOSC2 | 147.4 | 100.0 | 100.0 | 617763               |
| EYA1   | 161.7 | 100.0 | 100.0 | 602588;166780;113650 |
| EYA4   | 164.4 | 100.0 | 100.0 | 605362;601316        |
| FDXR   | 199.3 | 100.0 | 100.0 | 617717               |

|         |       |       |       |  |
|---------|-------|-------|-------|--|
| FGF3    | 243.5 | 100.0 | 100.0 | 610706   |
| FGFR3   | 254.4 | 100.0 | 100.0 | 602849   |
| FITM2   | 206.5 | 100.0 | 100.0 | 618635   |
| FOXF2   | 240.1 | 99.0  | 97.7  | -  |
| FOXI1   | 244.6 | 100.0 | 100.0 | 600791   |
| GAB1    | 162.6 | 100.0 | 100.0 | 605428   |
| GAS2    | 164.8 | 100.0 | 100.0 | -  |
| GATA3   | 260.3 | 100.0 | 100.0 | 146255   |
| GIPC3   | 240.6 | 100.0 | 100.0 | 601869   |
| GJB2    | 211.1 | 100.0 | 100.0 | 602540;149200;148350;601544;220290;148210;124500 |
| GJB3    | 200.7 | 100.0 | 100.0 | 220290;612644                                    |
| GJB6    | 187.9 | 100.0 | 100.0 | 612645;220290;612643                             |
| GLA     | 161.9 | 91.3  | 91.3  | 301500   |
| GPRASP2 | 200.2 | 100.0 | 100.0 | No OMIM phenotype                                |
| GPSM2   | 149.7 | 100.0 | 100.0 | 604213   |
| GRAP    | 202.0 | 100.0 | 100.0 | 618456   |
| GREB1L  | 179.8 | 100.0 | 100.0 | -  |
| GRHL2   | 169.7 | 100.0 | 100.0 | 608641   |
| GRXCR1  | 194.5 | 100.0 | 100.0 | 613285   |
| GRXCR2  | 196.6 | 100.0 | 100.0 | 615837   |
| GSDME   | 174.8 | 100.0 | 100.0 | 600994   |
| HARS1   | 159.8 | 100.0 | 100.0 | 614504   |
| HARS2   | 154.5 | 100.0 | 100.0 | 614926   |
| HGF     | 179.9 | 100.0 | 100.0 | 608265   |
| HOMER2  | 159.4 | 100.0 | 100.0 | 616707   |
| HSD17B4 | 137.6 | 96.6  | 96.6  | 233400   |
| IFNLR1  | 195.3 | 100.0 | 100.0 | -  |
| ILDR1   | 204.3 | 100.0 | 100.0 | 609646   |
| KARS1   | 159.4 | 100.0 | 100.0 | 613916   |
| KCNE1   | 323.6 | 100.0 | 100.0 | 612347   |

|          |       |       |       |                             |
|----------|-------|-------|-------|-----------------------------|
| KCNJ10   | 200.2 | 100.0 | 100.0 | 612780;600791               |
| KCNQ1    | 187.3 | 100.0 | 100.0 | 220400                      |
| KCNQ4    | 180.7 | 99.9  | 99.3  | 600101                      |
| KITLG    | 138.3 | 100.0 | 100.0 | 616697                      |
| LARS2    | 171.4 | 100.0 | 100.0 | 615300                      |
| LHFPL5   | 180.6 | 100.0 | 100.0 | 610265                      |
| LMX1A    | 182.6 | 100.0 | 100.0 | 301412                      |
| LOXHD1   | 168.1 | 100.0 | 100.0 | 613079                      |
| LOXL3    | 212.8 | 100.0 | 100.0 | -                           |
| LRP2     | 170.3 | 100.0 | 100.0 | 222448                      |
| LRP5     | 222.2 | 100.0 | 100.0 | 144750;607634               |
| LRTOMT   | 179.1 | 100.0 | 100.0 | 611451                      |
| MAN2B1   | 179.3 | 100.0 | 100.0 | No OMIM phenotype           |
| MARVELD2 | 255.9 | 100.0 | 100.0 | 610153                      |
| MCM2     | 185.5 | 100.0 | 100.0 | 616968                      |
| MET      | 197.9 | 100.0 | 100.0 | 616705                      |
| MGP      | 153.5 | 100.0 | 100.0 | 245150                      |
| MIA3     | 168.2 | 100.0 | 100.0 | -                           |
| MIR96    |       |       |       | 613074                      |
| MITF     | 196.6 | 100.0 | 100.0 | 103470;103500;193510        |
| MPDZ     | 163.8 | 100.0 | 100.0 | No OMIM phenotype           |
| MPZL2    | 173.4 | 100.0 | 100.0 | 618145                      |
| MSRB3    | 168.9 | 100.0 | 100.0 | 613718                      |
| MVD      | 201.4 | 100.0 | 100.0 | No OMIM phenotype           |
| MYH14    | 193.6 | 100.0 | 100.0 | 614369;600652               |
| MYH9     | 198.1 | 100.0 | 100.0 | 153640;600208;603622;153650 |
| MYO15A   | 191.7 | 100.0 | 100.0 | 600316                      |
| MYO3A    | 150.7 | 100.0 | 100.0 | 607101                      |
| MYO6     | 149.1 | 100.0 | 100.0 | 606346;607821               |
| MYO7A    | 190.3 | 100.0 | 100.0 | 600060;276900;601317        |

|        |       |       |       |                      |
|--------|-------|-------|-------|----------------------|
| NARS2  | 152.0 | 100.0 | 100.0 | 618434               |
| NCOA3  | 183.4 | 100.0 | 100.0 | No OMIM phenotype    |
| NDP    | 187.9 | 100.0 | 100.0 | 310600               |
| NLRP3  | 186.9 | 100.0 | 100.0 | 191900               |
| NOG    | 229.6 | 100.0 | 100.0 | -                    |
| OPA1   | 137.4 | 100.0 | 100.0 | 125250               |
| OSBPL2 | 183.2 | 100.0 | 100.0 | 616340               |
| OTOA   | 162.2 | 100.0 | 100.0 | 607039               |
| OTOF   | 181.9 | 100.0 | 100.0 | 601071               |
| OTOG   | 204.3 | 100.0 | 100.0 | 614945               |
| OTOGL  | 132.6 | 100.0 | 100.0 | 614944               |
| P2RX2  | 228.3 | 100.0 | 100.0 | 608224               |
| PAX3   | 207.8 | 100.0 | 100.0 | 148820;193500;122880 |
| PCDH15 | 177.6 | 100.0 | 100.0 | 602083;601067;609533 |
| PDE1C  | 162.1 | 100.0 | 100.0 | 618140               |
| PDZD7  | 223.3 | 100.0 | 100.0 | 605472               |
| PET100 | 190.8 | 100.0 | 100.0 | 220110               |
| PEX1   | 155.5 | 100.0 | 100.0 | 601539;234580;214100 |
| PEX26  | 169.3 | 100.0 | 100.0 | 614873               |
| PEX6   | 201.6 | 100.0 | 100.0 | 616617;614863        |
| PI4KB  | 186.2 | 100.0 | 100.0 | No OMIM phenotype    |
| PISD   | 189.2 | 100.0 | 100.0 | 618889               |
| PJVK   | 135.1 | 100.0 | 100.0 | 610220               |
| PLOD3  | 178.8 | 100.0 | 100.0 | 612394               |
| PLS1   | 149.8 | 100.0 | 100.0 | 618787               |
| PNPT1  | 136.3 | 100.0 | 100.0 | 614934               |
| POLD1  | 247.5 | 100.0 | 100.0 | 615381               |
| POLR1C | 139.8 | 83.0  | 82.8  | 248390               |
| POLR1D | 176.7 | 100.0 | 100.0 | 613717               |
| POU3F4 | 192.3 | 100.0 | 100.0 | 304400               |

|         |       |       |       |                             |
|---------|-------|-------|-------|-----------------------------|
| POU4F3  | 258.3 | 100.0 | 100.0 | 602459                      |
| PPIP5K2 | 140.1 | 100.0 | 100.0 | 618422                      |
| PRKCB   | 164.3 | 100.0 | 100.0 | -                           |
| PRORP   | 172.2 | 100.0 | 100.0 | No OMIM phenotype           |
| PRPS1   | 148.5 | 100.0 | 100.0 | 304500;301835;311070;300661 |
| PSIP1   | 152.4 | 100.0 | 100.0 | -                           |
| PTPRQ   | 137.0 | 92.8  | 92.6  | 613391                      |
| PTRH2   | 211.3 | 100.0 | 100.0 | No OMIM phenotype           |
| RAI1    | 242.0 | 100.0 | 100.0 | 182290                      |
| RDX     | 144.3 | 100.0 | 100.0 | 611022                      |
| REST    | 188.8 | 98.6  | 98.6  | 612431                      |
| RIPOR2  | 163.7 | 100.0 | 100.0 | 616515                      |
| RMND1   | 160.8 | 100.0 | 100.0 | 614922                      |
| ROBO1   | 171.1 | 100.0 | 100.0 | -                           |
| ROR1    | 179.6 | 100.0 | 100.0 | 617654                      |
| RRM2B   | 141.3 | 100.0 | 100.0 | No OMIM phenotype           |
| S1PR2   | 235.2 | 100.0 | 100.0 | 610419                      |
| SCD5    | 192.4 | 100.0 | 100.0 | -                           |
| SERAC1  | 147.9 | 100.0 | 100.0 | 614739                      |
| SERPIN6 | 175.8 | 100.0 | 100.0 | 613453                      |
| SEZ6    | 198.6 | 100.0 | 100.0 | No OMIM phenotype           |
| SIX1    | 215.6 | 100.0 | 100.0 | 605192;608389               |
| SIX5    | 227.7 | 100.0 | 100.0 | 610896                      |
| SLC12A1 | 152.5 | 96.2  | 96.2  | -                           |
| SLC12A2 | 161.5 | 100.0 | 100.0 | 619081;619083;619080        |
| SLC17A8 | 170.7 | 100.0 | 100.0 | 605583                      |
| SLC19A2 | 184.4 | 100.0 | 100.0 | 249270                      |
| SLC22A4 | 176.7 | 100.0 | 100.0 | -                           |
| SLC26A4 | 156.2 | 100.0 | 100.0 | 600791;274600               |
| SLC26A5 | 159.9 | 100.0 | 100.0 | 613865                      |

|          |       |       |       |                      |
|----------|-------|-------|-------|----------------------|
| SLC29A3  | 194.3 | 100.0 | 100.0 | 602782               |
| SLC33A1  | 177.8 | 100.0 | 100.0 | 614482               |
| SLC44A4  | 265.7 | 100.0 | 100.0 | 617606               |
| SLC4A11  | 204.2 | 100.0 | 100.0 | 217400               |
| SLC52A2  | 268.4 | 100.0 | 100.0 | 614707               |
| SLC52A3  | 227.2 | 100.0 | 100.0 | 211530               |
| SLC9A3R1 | 198.6 | 100.0 | 100.0 | -                    |
| SLITRK6  | 192.7 | 100.0 | 100.0 | 221200               |
| SMPX     | 141.2 | 100.0 | 100.0 | 300066               |
| SNAI2    | 192.8 | 100.0 | 100.0 | 172800;608890        |
| SOX10    | 254.5 | 100.0 | 100.0 | 613266;609136;611584 |
| SPATA5   | 161.2 | 100.0 | 100.0 | 616577               |
| SPNS2    | 190.1 | 99.9  | 99.6  | 618457               |
| STRC     | 201.6 | 100.0 | 100.0 | 603720               |
| SUCLA2   | 155.1 | 100.0 | 99.9  | 612073               |
| SYNE4    | 224.7 | 100.0 | 100.0 | 615540               |
| TBC1D24  | 217.4 | 100.0 | 100.0 | 220500;616044;614617 |
| TBL1X    | 176.1 | 100.0 | 100.0 | 301033               |
| TBL1Y    | 56.7  | 50.0  | 50.0  | No OMIM phenotype    |
| TCOF1    | 188.3 | 100.0 | 100.0 | 154500               |
| TECTA    | 196.1 | 100.0 | 100.0 | 601543;603629        |
| TFAP2A   | 192.5 | 100.0 | 100.0 | 113620               |
| THOC1    | 154.6 | 100.0 | 100.0 | No OMIM phenotype    |
| TIMM8A   | 155.8 | 100.0 | 100.0 | 304700               |
| TJP2     | 186.6 | 98.8  | 98.8  | 613558               |
| TMC1     | 152.5 | 100.0 | 100.0 | 606705;600974        |
| TMEM132E | 228.2 | 100.0 | 100.0 | 618481               |
| TMEM43   | 157.3 | 100.0 | 100.0 | -                    |
| TMIE     | 163.1 | 100.0 | 100.0 | 600971               |
| TMPRSS3  | 169.3 | 100.0 | 100.0 | 601072               |



|        |       |       |       |                      |
|--------|-------|-------|-------|----------------------|
| TMTC2  | 163.3 | 97.5  | 97.5  | -                    |
| TNC    | 189.8 | 100.0 | 100.0 | 615629               |
| TPRN   | 206.8 | 97.6  | 96.0  | 613307               |
| TRIOBP | 236.5 | 100.0 | 100.0 | 609823               |
| TRRAP  | 174.9 | 100.0 | 100.0 | 618778               |
| TSHZ1  | 229.8 | 100.0 | 100.0 | 607842               |
| TUBB4B | 274.5 | 100.0 | 100.0 | 617879               |
| TWNK   | 197.1 | 100.0 | 100.0 | 616138               |
| TYR    | 192.6 | 100.0 | 100.0 | 103470               |
| USH1C  | 159.2 | 100.0 | 100.0 | 276904;602092        |
| USH1G  | 234.5 | 100.0 | 100.0 | 606943               |
| USH2A  | 176.9 | 99.5  | 99.5  | 613809;276901        |
| USP48  | 162.8 | 100.0 | 100.0 | No OMIM phenotype    |
| WBP2   | 162.5 | 100.0 | 100.0 | 617639               |
| WFS1   | 223.7 | 100.0 | 100.0 | 222300;600965;614296 |
| WHRN   | 214.1 | 100.0 | 100.0 | 611383;607084        |
| XYLT2  | 223.0 | 96.7  | 96.7  | 605822               |
| YAP1   | 170.1 | 100.0 | 100.0 | 120433               |

*Gene symbols used follow HGCN guidelines: Gray KA, Yates B, Seal RL, Wright MW, Bruford EA. Nucleic Acids Res. 2015 Jan 43(Database issue):D1079-85.*

*TWIST is the default chemistry for all WES samples. Agilent V5 was the default chemistry until Q3 2021.*

*Median Coverage describes the average number of reads seen across 50 exomes.*

*Covered 10x describes the percentage of a gene's coding sequence that is covered at least 10x.*

*Covered 20x describes the percentage of a gene's coding sequence that is covered at least 20x.*

*Genes with no value for coverage are non protein coding genes.*

*Non protein coding genes are covered, but as coverage statistics are based on protein coding regions, statistics could not be generated.*

*OMIM release used for OMIM disease identifiers and descriptions: September 1st, 2021.*