

# WES NEUROPATHIES DG 3.1

| <i>Gene</i> | <i>Median coverage</i> | <i>% covered &gt;10x</i> | <i>% covered &gt;20x</i> | <i>OMIM disease ID</i> |
|-------------|------------------------|--------------------------|--------------------------|------------------------|
| AAAS        | 117.1                  | 100.0                    | 99.9                     | 231550                 |
| AARS1       | 124.9                  | 100.0                    | 99.9                     | 613287                 |
| ABCA1       | 115.8                  | 99.9                     | 99.1                     | 205400                 |
| ABCD1       | 78.1                   | 75.8                     | 71.6                     | 300100                 |
| ABHD12      | 94.6                   | 91.2                     | 85.2                     | 612674                 |
| ADPRS       | 159.0                  | 100.0                    | 99.8                     | MIM pheno ID 618170    |
| AFG3L2      | 115.3                  | 95.0                     | 91.1                     | No OMIM phenotype      |
| AGRN        | 139.7                  | 96.9                     | 92.6                     | 615120                 |
| AGTPBP1     | 144.2                  | 96.0                     | 94.1                     | 618276                 |
| AIFM1       | 117.3                  | 99.9                     | 98.8                     | 310490                 |
| AMACR       | 159.5                  | 100.0                    | 100.0                    | 614307                 |
| APTX        | 122.7                  | 94.9                     | 92.4                     | 208920                 |
| ARHGEF10    | 132.1                  | 99.8                     | 98.0                     | 608236                 |
| ARHGEF28    | 117.2                  | 99.2                     | 94.4                     | -                      |
| ARSA        | 126.4                  | 100.0                    | 99.8                     | 250100                 |
| ATAD3A      | 84.8                   | 91.9                     | 83.2                     | 617183                 |
| ATL1        | 180.1                  | 100.0                    | 99.7                     | 613708                 |
| ATL3        | 147.6                  | 99.8                     | 98.3                     | 615632                 |
| ATP13A2     | 138.1                  | 100.0                    | 99.5                     | No OMIM phenotype      |
| ATP1A1      | 143.2                  | 100.0                    | 100.0                    | 618036                 |
| ATP7A       | 134.6                  | 99.0                     | 96.9                     | 304150                 |
| BAG3        | 184.0                  | 100.0                    | 100.0                    | 613881;612954          |
| BICD2       | 137.0                  | 100.0                    | 99.7                     | 615290                 |
| BSCL2       | 113.7                  | 100.0                    | 100.0                    | 600794                 |
| C12orf65    | 122.8                  | 99.8                     | 98.5                     | 613559;615035          |

|          |       |       |       |                                  |
|----------|-------|-------|-------|----------------------------------|
| C19orf12 | 122.6 | 100.0 | 99.8  | 615043;614298                    |
| C1orf194 | 66.7  | 100.0 | 99.6  | -                                |
| CADM3    | 104.1 | 100.0 | 99.9  | No OMIM phenotype                |
| CCT5     | 146.2 | 100.0 | 99.7  | 256840                           |
| CHCHD10  | 25.2  | 59.1  | 43.9  | 615911;616209;615048             |
| CNTNAP1  | 173.7 | 100.0 | 99.8  | 618186                           |
| COA3     | 156.1 | 100.0 | 100.0 | 220110                           |
| COA7     | 142.6 | 100.0 | 100.0 | 618387                           |
| COL6A5   | 163.1 | 99.9  | 99.5  | 28073787                         |
| COX20    | 72.8  | 97.8  | 88.3  | 220110                           |
| COX6A1   | 177.4 | 100.0 | 99.5  | 616039                           |
| CTDP1    | 129.4 | 88.4  | 84.3  | 604168                           |
| CYP27A1  | 180.7 | 98.9  | 96.7  | 213700                           |
| DCAF8    | 110.8 | 100.0 | 99.9  | 610100                           |
| DCTN1    | 126.0 | 100.0 | 98.8  | 607641                           |
| DCTN2    | 102.0 | 100.0 | 99.7  | -                                |
| DGAT2    | 93.6  | 99.1  | 95.5  | -                                |
| DHTKD1   | 145.8 | 99.9  | 98.9  | 615025                           |
| DNAH10   | 150.2 | 99.9  | 99.4  | -                                |
| DNAJB2   | 139.8 | 100.0 | 100.0 | 614881                           |
| DNAJB5   | 140.6 | 95.7  | 91.3  | -                                |
| DNAJC3   | 148.3 | 100.0 | 99.7  | 616192                           |
| DNM1L    | 139.3 | 99.9  | 98.5  | PMID: 33387674;31868880;30085106 |
| DNM2     | 138.9 | 98.1  | 94.5  | 606482                           |
| DNMT1    | 131.2 | 99.2  | 99.0  | 614116                           |
| DRP2     | 92.3  | 99.1  | 96.5  | -                                |
| DST      | 168.2 | 95.5  | 95.0  | 614653                           |
| DYNC1H1  | 157.5 | 99.9  | 99.4  | 614228                           |
| EGR2     | 152.7 | 100.0 | 100.0 | 145900;607678                    |
| ELOVL5   | 130.0 | 100.0 | 99.8  | 615957                           |

|         |       |       |       |                             |
|---------|-------|-------|-------|-----------------------------|
| ELP1    | 149.3 | 99.8  | 99.0  | 223900                      |
| EMILIN1 | 107.7 | 99.3  | 89.8  | PMID: 31978608;26462740     |
| EXOSC8  | 91.0  | 97.9  | 91.2  | 616081                      |
| EXOSC9  | 173.4 | 99.7  | 97.2  | 618065                      |
| FAM126A | 146.4 | 100.0 | 99.4  | 610532                      |
| FBLN5   | 121.2 | 91.8  | 91.8  | 614434;608895;219100        |
| FBXO38  | 188.8 | 99.9  | 99.3  | 615575                      |
| FGD4    | 120.6 | 99.9  | 99.4  | 609311                      |
| FIG4    | 190.3 | 100.0 | 99.8  | 611228                      |
| FLVCR1  | 153.2 | 100.0 | 98.9  | 609033                      |
| FXN     | 72.3  | 95.5  | 80.1  | MIM pheno ID: 229300        |
| GALC    | 117.3 | 99.8  | 98.3  | 245200                      |
| GAN     | 177.4 | 100.0 | 99.6  | 256850                      |
| GARS1   | 154.4 | 99.9  | 99.1  | 601472;600794               |
| GBE1    | 200.1 | 100.0 | 99.6  | 263570;232500               |
| GBF1    | 142.1 | 98.3  | 98.0  | PMID: 32937143              |
| GDAP1   | 185.1 | 99.8  | 99.3  | 608340;214400;607831;607706 |
| GJB1    | 169.1 | 100.0 | 100.0 | 302800                      |
| GJB3    | 250.6 | 100.0 | 100.0 | 133200;220290;612644        |
| GLA     | 81.9  | 91.1  | 88.2  | 301500                      |
| GLE1    | 103.6 | 100.0 | 100.0 | 611890                      |
| GNB4    | 194.6 | 100.0 | 100.0 | 615185                      |
| GNE     | 132.7 | 100.0 | 99.7  | PMID: 31167812              |
| GSN     | 117.2 | 95.8  | 93.5  | 105120                      |
| HADHA   | 87.5  | 97.2  | 91.6  | 609015                      |
| HADHB   | 90.7  | 98.8  | 89.7  | 609015                      |
| HARS1   | 152.0 | 100.0 | 100.0 | 614504;616625               |
| HINT1   | 62.4  | 98.3  | 89.3  | 137200                      |
| HK1     | 140.2 | 100.0 | 100.0 | 605285                      |
| HMBS    | 103.3 | 99.9  | 99.4  | 176000                      |

|         |       |       |       |  |
|---------|-------|-------|-------|--|
| HOXD10  | 166.0 | 100.0 | 100.0 | 192950                                       |
| HSD17B4 | 130.0 | 95.4  | 93.1  | 261515;233400                                |
| HSPB1   | 55.8  | 98.8  | 91.6  | 606595;608634                                |
| HSPB3   | 275.4 | 100.0 | 100.0 | 613376                                       |
| HSPB8   | 187.6 | 100.0 | 100.0 | 158590;608673                                |
| IFRD1   | 155.4 | 99.7  | 98.6  | -  |
| IGHMBP2 | 118.2 | 98.8  | 95.1  | 604320                                       |
| INF2    | 89.3  | 86.7  | 83.8  | 614455                                       |
| ITPR3   | 152.6 | 100.0 | 99.7  | PMID: 27549087;PMID: 24627108;PMID: 32949214 |
| JAG1    | 147.4 | 97.7  | 96.8  | PMID: 32065591                               |
| KARS1   | 133.2 | 100.0 | 99.9  | 613641                                       |
| KBTBD13 | 102.9 | 99.8  | 95.8  | 609273                                       |
| KIF1A   | 114.7 | 97.4  | 95.2  | 614213                                       |
| KIF1B   | 167.4 | 100.0 | 99.6  | 118210;256700;171300                         |
| KIF5A   | 141.4 | 100.0 | 99.9  | 604187                                       |
| KLC2    | 129.2 | 99.2  | 97.9  | No OMIM phenotype                            |
| LAMA2   | 155.8 | 100.0 | 99.6  | PMID: 25648254;PMID: 24957499                |
| LITAF   | 130.2 | 98.2  | 92.7  | 601098                                       |
| LMNA    | 97.4  | 97.4  | 91.9  | 605588                                       |
| LRIG3   | 187.6 | 99.8  | 98.8  | -  |
| LRSAM1  | 139.4 | 100.0 | 99.9  | 614436                                       |
| MAG     | 161.0 | 100.0 | 100.0 | No OMIM phenotype                            |
| MARS1   | 114.4 | 99.7  | 97.4  | 616280;615486                                |
| MCM3AP  | 149.9 | 99.9  | 99.1  | 618124                                       |
| MED25   | 151.9 | 100.0 | 99.8  | 605589                                       |
| MFN2    | 138.2 | 100.0 | 99.9  | 601152;609260                                |
| MME     | 138.2 | 99.8  | 98.7  | 617017;617018                                |
| MORC2   | 141.7 | 100.0 | 99.8  | 616688                                       |
| MPV17   | 97.4  | 100.0 | 97.2  | 618400;256800                                |
| MPZ     | 104.4 | 87.9  | 84.1  | 145900;607791;118200;607677;607736           |

|         |       |       |       |                      |
|---------|-------|-------|-------|----------------------|
| MTMR2   | 120.1 | 100.0 | 99.0  | 601382               |
| MYH14   | 114.1 | 98.4  | 94.0  | 614369;600652        |
| MYO1A   | 126.2 | 100.0 | 99.8  | -                    |
| NAGLU   | 118.0 | 92.9  | 89.9  | 616491               |
| NARS1   | 181.6 | 100.0 | 100.0 | PMID: 32738225       |
| NDRG1   | 133.0 | 100.0 | 100.0 | 601455               |
| NDUFA9  | 115.5 | 99.9  | 96.5  | 618247               |
| NEFH    | 108.0 | 93.4  | 84.5  | 162230               |
| NEFL    | 153.5 | 99.9  | 98.2  | 607734;607684        |
| NEMF    | 135.8 | 100.0 | 99.2  | No OMIM phenotype    |
| NFASC   | 139.4 | 100.0 | 99.9  | 618356               |
| NGF     | 224.8 | 100.0 | 100.0 | 608654               |
| NIPA1   | 191.5 | 100.0 | 100.0 | 600363               |
| NMNAT2  | 110.5 | 99.9  | 98.9  | -                    |
| NTRK1   | 138.9 | 99.8  | 98.2  | 256800               |
| PDK3    | 122.5 | 99.5  | 97.2  | 300905               |
| PDXK    | 122.8 | 79.3  | 76.6  | 618511               |
| PDYN    | 138.2 | 100.0 | 100.0 | 610245               |
| PEX1    | 155.5 | 99.9  | 99.4  | 601539;214100        |
| PEX10   | 101.8 | 96.8  | 89.7  | 614870;614871        |
| PEX16   | 158.6 | 97.9  | 94.2  | 614876;614877        |
| PEX7    | 135.9 | 87.8  | 80.7  | 614879               |
| PHYH    | 89.1  | 100.0 | 99.6  | 266500               |
| PIEZO2  | 121.6 | 100.0 | 99.5  | 617146               |
| PLA2G6  | 112.9 | 92.2  | 90.7  | 256600               |
| PLD3    | 189.9 | 99.9  | 99.1  | 617770               |
| PLEKHG5 | 97.3  | 95.3  | 91.1  | 615376;611067        |
| PMM2    | 145.4 | 100.0 | 100.0 | 212065               |
| PMP2    | 149.0 | 100.0 | 100.0 | 618279               |
| PMP22   | 123.5 | 100.0 | 100.0 | 145900;118300;118220 |

|         |       |       |       |                               |
|---------|-------|-------|-------|-------------------------------|
| PNKP    | 112.0 | 100.0 | 100.0 | 613402;616267                 |
| PNPT1   | 63.9  | 97.7  | 89.7  | 614932                        |
| POLG    | 111.5 | 100.0 | 99.3  | 258450;607459;157640          |
| POLG2   | 235.4 | 99.6  | 98.0  | PMID: 28078310;PMID: 29625556 |
| POLR3B  | 157.1 | 99.9  | 98.6  | PMID: 33417887                |
| PRDM12  | 123.7 | 90.8  | 88.0  | 616488                        |
| PRNP    | 133.8 | 100.0 | 100.0 | PMID: 24224623;PMID: 29984897 |
| PRPS1   | 118.4 | 86.4  | 86.4  | 301835;311070                 |
| PRX     | 142.8 | 96.0  | 95.5  | 145900;614895                 |
| PSAP    | 112.4 | 100.0 | 100.0 | 611722                        |
| RAB7A   | 151.4 | 100.0 | 99.9  | 600882                        |
| REEP1   | 82.5  | 78.7  | 76.1  | 610250;614751                 |
| RETREG1 | 141.2 | 98.8  | 95.1  | 613115                        |
| RNF170  | 146.5 | 99.6  | 97.6  | 608984                        |
| SACS    | 174.6 | 100.0 | 99.9  | 270550                        |
| SAMD9L  | 192.5 | 100.0 | 100.0 | 159550                        |
| SBF1    | 130.0 | 99.0  | 97.7  | 615284                        |
| SBF2    | 130.5 | 99.9  | 99.4  | 604563                        |
| SCARB2  | 121.3 | 100.0 | 99.8  | PMID: 31407473;PMID: 21670406 |
| SCN10A  | 148.7 | 100.0 | 99.6  | 615551                        |
| SCN11A  | 144.6 | 99.8  | 98.3  | 615548                        |
| SCN9A   | 163.1 | 99.3  | 97.9  | 133020;243000                 |
| SCO2    | 107.3 | 100.0 | 100.0 | 604377                        |
| SCP2    | 130.8 | 100.0 | 99.2  | No OMIM phenotype             |
| SCYL1   | 155.2 | 100.0 | 100.0 | 616719                        |
| SEPTIN9 | 154.2 | 100.0 | 99.9  | 162100                        |
| SETX    | 182.3 | 100.0 | 99.8  | 602433;606002                 |
| SGPL1   | 159.8 | 100.0 | 100.0 | -                             |
| SH3TC2  | 107.9 | 100.0 | 99.7  | 601596;613353                 |
| SIGMAR1 | 134.5 | 100.0 | 100.0 | 614373;605726                 |

|          |       |       |       |  |
|----------|-------|-------|-------|--|
| SLC12A6  | 146.8 | 100.0 | 100.0 | 218000   |
| SLC25A19 | 94.0  | 100.0 | 98.5  | MIM pheno ID: 613710;PMID: 31295743;PMID: 19798730 |
| SLC25A46 | 199.3 | 99.7  | 97.3  | 616505   |
| SLC52A2  | 170.8 | 100.0 | 100.0 | 614707   |
| SLC52A3  | 125.5 | 100.0 | 100.0 | 211530   |
| SLC5A7   | 118.9 | 100.0 | 99.9  | 158580   |
| SORD     | 100.3 | 90.3  | 89.1  | 618912   |
| SOX10    | 70.3  | 99.9  | 97.9  | 609136   |
| SPG11    | 135.0 | 100.0 | 99.3  | 616668   |
| SPTAN1   | 126.6 | 99.1  | 98.6  | PMID: 31332438                                     |
| SPTBN4   | 91.4  | 97.3  | 91.0  | 617519   |
| SPTLC1   | 132.2 | 99.2  | 95.4  | 162400   |
| SPTLC2   | 158.5 | 100.0 | 100.0 | 613640   |
| SPTLC3   | 156.9 | 100.0 | 99.9  | -  |
| SURF1    | 94.9  | 89.4  | 88.2  | 256000;616684                                      |
| SYT2     | 98.5  | 99.9  | 99.0  | 616040   |
| TBCE     | 146.6 | 99.8  | 97.5  | 617207   |
| TDP1     | 123.5 | 99.9  | 99.5  | 607250   |
| TDRKH    | 107.2 | 94.7  | 94.7  | PMID: 30503856                                     |
| TFG      | 139.5 | 96.9  | 96.3  | 604484   |
| TRIM2    | 164.9 | 93.9  | 93.3  | 615490   |
| TRPV4    | 158.6 | 100.0 | 99.9  | 606071   |
| TTR      | 151.6 | 94.6  | 94.6  | 105210   |
| TUBB2A   | 65.8  | 97.0  | 95.7  | PMID: 32203252;29547997                            |
| TUBB3    | 113.8 | 98.3  | 96.9  | 600638   |
| TWNK     | 202.8 | 100.0 | 100.0 | 616138   |
| UBA5     | 93.7  | 97.8  | 86.8  | No OMIM phenotype                                  |
| UCHL1    | 117.1 | 99.8  | 92.5  | 615491   |
| UQCRC1   | 132.5 | 99.8  | 98.4  | PMID: 33141179                                     |
| VCP      | 122.7 | 100.0 | 99.2  | 616687   |

|         |       |       |      |                   |
|---------|-------|-------|------|-------------------|
| VRK1    | 156.9 | 99.7  | 98.5 | 607596            |
| VWA1    | 67.0  | 84.1  | 76.3 | No OMIM phenotype |
| WARS1   | 121.4 | 99.8  | 98.3 | 617721            |
| WNK1    | 156.2 | 99.9  | 99.6 | 201300            |
| XRCC1   | 130.5 | 100.0 | 98.8 | No OMIM phenotype |
| YARS1   | 131.1 | 100.0 | 99.9 | 608323            |
| ZFYVE26 | 116.7 | 100.0 | 99.1 | No OMIM phenotype |

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

*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 Median Coverage and % Covered 10x/20x denoting NC are non-coding genes for which coverage statistics could not be generated.*

*OMIM release used for OMIM disease identifiers and descriptions : October 1st, 2016.*

*Ad 1. "No OMIM phenotype" signifies a gene without a current OMIM association Ad 2. OMIM phenotype descriptions between {} signify risk factors*