POLYNEUROPATHIES PANEL[1] DG-5.2.0 (248 GENES)

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.
OMIM disease identifiers and descriptions : October 25th, 2026.
This list is accurate for panel version DG 5.2.0
non-protein coding genes are covered, but as coverage statistics are based on protein coding regions, statistics could not be generated.
Ad 1. Blank field signifies a gene without a current OMIM association
Ad 2. OMIM phenotype descriptions between {} signify risk factors
*Ad * This value indicates the percentage of a gene's coding sequence covered at or above the specified Genotype Quality (GQ) threshold, based on alignment against the GRCh38 reference genome. The GQ score is a measure of the confidence of the genotype call and is calculated based on both the quantity and quality of the DNA reads.*
- GQ 20: 99% confidence in the genotype call
- GQ 30: 99.9% confidence in the genotype call

Gene	WES GQ>20 | GQ>30*	srWGS GQ>20 | GQ>30*	lrWGS GQ>20 | GQ>30*	Associated Phenotype description and OMIM disease ID
AAAS	100% | 100%	97% | 97%	98% | 98%	Achalasia-addisonianism-alacrimia syndrome, 231550
AARS1	100% | 100%	97% | 97%	99% | 99%	Developmental and epileptic encephalopathy 29, 616339;Charcot-Marie-Tooth disease, axonal, type 2N, 613287;?Leukoencephalopathy, hereditary diffuse, with spheroids 2, 619661;Trichothiodystrophy 8, nonphotosensitive, 619691
ABCA1	100% | 100%	97% | 97%	99% | 99%	Tangier disease, 205400;HDL deficiency, familial, 1, 604091
ABCD1	85% | 84%	98% | 98%	100% | 100%	Adrenoleukodystrophy, 300100;Adrenomyeloneuropathy, adult, 300100
ABHD12	99% | 99%	95% | 95%	99% | 99%	Polyneuropathy, hearing loss, ataxia, retinitis pigmentosa, and cataract, 612674
ACOX1	98% | 98%	97% | 97%	99% | 99%	Mitchell syndrome, 618960;Peroxisomal acyl-CoA oxidase deficiency, 264470
ADPRS	100% | 100%	98% | 98%	99% | 99%	Neurodegeneration, childhood-onset, stress-induced, with variable ataxia and seizures, 618170
AFG3L2	93% | 92%	97% | 97%	99% | 99%	Spastic ataxia 5, autosomal recessive, 614487;Optic atrophy 12, 618977;Spinocerebellar ataxia 28, 610246
AGRN	100% | 100%	94% | 94%	97% | 97%	Myasthenic syndrome, congenital, 8, with pre- and postsynaptic defects, 615120
AGTPBP1	97% | 97%	98% | 98%	100% | 100%	Neurodegeneration, childhood-onset, with cerebellar atrophy, 618276
AHNAK2	96% | 96%	84% | 84%	86% | 85%	
AIFM1	99% | 99%	99% | 99%	100% | 100%	Combined oxidative phosphorylation deficiency 6, 300816;Cowchock syndrome, 310490;Spondyloepimetaphyseal dysplasia, X-linked, with hypomyelinating leukodystrophy, 300232;Deafness, X-linked 5, 300614
AMACR	99% | 99%	97% | 97%	99% | 99%	Alpha-methylacyl-CoA racemase deficiency, 614307;Bile acid synthesis defect, congenital, 4, 214950
APTX	100% | 100%	96% | 96%	100% | 100%	Ataxia, early-onset, with oculomotor apraxia and hypoalbuminemia, 208920
ARHGAP19	94% | 94%	97% | 97%	98% | 98%	Charcot-Marie-Tooth disease, axonal, type 2KK, 621466
ARHGEF10	100% | 100%	97% | 97%	99% | 99%	?Slowed nerve conduction velocity, AD, 608236
ARHGEF28	100% | 100%	97% | 97%	99% | 99%	

ARSA	100% | 100%	96% | 96%	98% | 98%	Metachromatic leukodystrophy, 250100
ATAD3A	98% | 98%	94% | 94%	98% | 98%	Harel-Yoon syndrome, 617183;Pontocerebellar hypoplasia, hypotonia, and respiratory insufficiency syndrome, neonatal lethal, 618810
ATL1	100% | 100%	97% | 97%	99% | 99%	Spastic paraplegia 3A, autosomal dominant, 182600;Neuropathy, hereditary sensory, type ID, 613708
ATL3	100% | 100%	97% | 97%	99% | 99%	Neuropathy, hereditary sensory, type IF, 615632
ATP13A2	99% | 99%	96% | 96%	98% | 98%	Spastic paraplegia 78, autosomal recessive, 617225;Kufor-Rakeb syndrome, 606693
ATP1A1	95% | 95%	97% | 97%	99% | 99%	Hypomagnesemia, seizures, and impaired intellectual development 2, 618314;Charcot-Marie-Tooth disease, axonal, type 2DD, 618036
ATP7A	95% | 94%	99% | 99%	100% | 100%	Occipital horn syndrome, 304150;Neuronopathy, distal hereditary motor, X-linked, 300489;Menkes disease, 309400
B2M	100% | 100%	97% | 97%	100% | 100%	Amyloidosis, hereditary systemic 6, 620659;Immunodeficiency 43, 241600
B4GALNT1	100% | 100%	97% | 97%	98% | 98%	Spastic paraplegia 26, autosomal recessive, 609195
BAG3	100% | 100%	97% | 97%	98% | 96%	?Neuronopathy, distal hereditary motor, autosomal dominant 15, 621094;Cardiomyopathy, dilated, 1HH, 613881;Myopathy, myofibrillar, 6, 612954;Charcot-Marie-Tooth disease, axonal, type 2JJ, 621095
BICD2	100% | 100%	97% | 97%	100% | 100%	Spinal muscular atrophy, lower extremity-predominant, 2B, autosomal dominant, 618291;Spinal muscular atrophy, lower extremity-predominant, 2A, autosomal dominant, 615290
BSCL2	100% | 100%	97% | 97%	99% | 99%	Lipodystrophy, congenital generalized, type 2, 269700;Neuronopathy, distal hereditary motor, autosomal dominant 13, 619112;Silver spastic paraplegia syndrome, 270685;Encephalopathy, progressive, with or without lipodystrophy, 615924
C19orf12	99% | 99%	95% | 95%	98% | 98%	Neurodegeneration with brain iron accumulation 4, 614298;?Spastic paraplegia 43, autosomal recessive, 615043
CADM3	100% | 100%	97% | 97%	99% | 99%	Charcot-Marie-Tooth disease, axonal, type 2FF, 619519
CCT5	99% | 99%	96% | 96%	99% | 99%	?Neuropathy, hereditary sensory, with spastic paraplegia, 256840
CD59	89% | 89%	98% | 98%	99% | 99%	Hemolytic anemia, CD59-mediated, with or without immune-mediated polyneuropathy, 612300
CFAP276	99% | 99%	92% | 92%	99% | 99%	
CHCHD10	99% | 99%	95% | 95%	96% | 96%	?Myopathy, isolated mitochondrial, autosomal dominant, 616209;Spinal muscular atrophy, Jokela type, 615048;Frontotemporal dementia and/or amyotrophic lateral sclerosis 2, 615911
CNTNAP1	100% | 100%	96% | 96%	98% | 98%	Lethal congenital contracture syndrome 7, 616286;Hypomyelinating neuropathy, congenital, 3, 618186
COA3	100% | 100%	96% | 96%	99% | 99%	?Mitochondrial complex IV deficiency, nuclear type 14, 619058

COA7	100% | 100%	96% | 96%	98% | 98%	Spinocerebellar ataxia, autosomal recessive, with axonal neuropathy 3, 618387
COL6A5	100% | 100%	97% | 97%	99% | 99%	
COMP	96% | 96%	96% | 96%	98% | 98%	Pseudoachondroplasia, 177170;Carpal tunnel syndrome 2, 619161;Epiphyseal dysplasia, multiple, 1, 132400
COX18	100% | 100%	96% | 96%	99% | 99%	?Mitochondrial complex IV deficiency, nuclear type 25, 621487;Charcot-Marie-Tooth disease, axonal, type 2MM, 621488
COX20	100% | 100%	98% | 98%	100% | 100%	Mitochondrial complex IV deficiency, nuclear type 11, 619054
COX6A1	99% | 99%	97% | 97%	98% | 98%	Charcot-Marie-Tooth disease, recessive intermediate D, 616039
CRYAB	100% | 100%	97% | 97%	98% | 98%	Myopathy, myofibrillar, 2B, infantile-onset, 613869;Myopathy, myofibrillar, 2A, adult-onset, 608810;Cataract 16, multiple types, 613763;Cardiomyopathy, dilated, 1II, 615184
CTDP1	91% | 91%	96% | 96%	99% | 98%	Congenital cataracts, facial dysmorphism, and neuropathy, 604168
CYP27A1	100% | 100%	97% | 97%	100% | 100%	Cerebrotendinous xanthomatosis, 213700
CYP2U1	100% | 100%	96% | 96%	99% | 99%	Spastic paraplegia 56, autosomal recessive, 615030
CYP7B1	100% | 100%	98% | 98%	99% | 99%	Spastic paraplegia 5A, autosomal recessive, 270800;Bile acid synthesis defect, congenital, 3, 613812
DARS2	100% | 100%	97% | 97%	99% | 99%	Leukoencephalopathy with brain stem and spinal cord involvement and lactate elevation, 611105;Charcot-Marie-Tooth disease, axonal, type 2LL, 621485
DCAF8	97% | 97%	97% | 97%	100% | 100%	?Giant axonal neuropathy 2, autosomal dominant, 610100
DCTN1	100% | 100%	97% | 97%	99% | 99%	Perry syndrome, 168605;{Amyotrophic lateral sclerosis, susceptibility to}, 105400;Neuronopathy, distal hereditary motor, autosomal dominant 14, 607641
DCTN2	100% | 100%	97% | 97%	99% | 99%	
DGAT2	100% | 100%	97% | 97%	99% | 99%	
DHTKD1	92% | 92%	95% | 95%	99% | 99%	?Charcot-Marie-Tooth disease, axonal, type 2Q, 615025;Alpha-aminoadipic and alpha-ketoadipic aciduria, 204750
DNAJB2	100% | 100%	96% | 96%	99% | 99%	Neuronopathy, distal hereditary motor, autosomal recessive 5, 614881
DNAJB5	100% | 100%	97% | 97%	99% | 99%	
DNAJC3	92% | 92%	98% | 98%	99% | 99%	Ataxia, combined cerebellar and peripheral, with hearing loss and diabetes mellitus, 616192
DNM1L	100% | 100%	98% | 98%	99% | 99%	Optic atrophy 5, 610708;Encephalopathy, lethal, due to defective mitochondrial peroxisomal fission 1, 614388
DNM2	93% | 92%	96% | 95%	98% | 98%	Centronuclear myopathy 1, 160150;Charcot-Marie-Tooth disease, axonal type 2M, 606482;Charcot-Marie-Tooth disease, dominant intermediate B, 606482;Lethal congenital contracture syndrome 5, 615368

DNMT1	99% | 99%	96% | 96%	99% | 99%	Neuropathy, hereditary sensory, type IE, 614116;Cerebellar ataxia, deafness, and narcolepsy, autosomal dominant, 604121
DRP2	99% | 99%	99% | 99%	100% | 100%	
DST	100% | 100%	98% | 98%	100% | 100%	Congenital myopathy 29 with contractures, 621510;Neuropathy, hereditary sensory and autonomic, type VI, 614653;Lethal congenital contracture syndrome 12, 621511;Epidermolysis bullosa simplex 3, localized or generalized intermediate, with bp230 deficiency, 615425
DYNC1H1	99% | 99%	97% | 97%	99% | 99%	Charcot-Marie-Tooth disease, axonal, type 2O, 614228;Spinal muscular atrophy, lower extremity-predominant 1, AD, 158600;Cortical dysplasia, complex, with other brain malformations 13, 614563
EGR2	100% | 100%	96% | 96%	99% | 99%	Dejerine-Sottas disease, 145900;Charcot-Marie-Tooth disease, type 1D, 607678;Hypomyelinating neuropathy, congenital, 1, 605253
ELF2	100% | 100%	98% | 98%	100% | 100%	
ELOVL5	100% | 100%	97% | 97%	99% | 99%	Spinocerebellar ataxia 38, 615957
ELP1	100% | 100%	98% | 98%	100% | 100%	{Medulloblastoma}, 155255;Dysautonomia, familial, 223900
EMILIN1	98% | 98%	96% | 96%	98% | 98%	Neuronopathy, distal hereditary motor, autosomal dominant 10, 620080;Arterial tortuosity-bone fragility syndrome, 620908
ERBB2	100% | 100%	96% | 96%	99% | 99%	Gastric cancer, somatic, 613659;Adenocarcinoma of lung, somatic, 211980;Ovarian cancer, somatic, 167000;?Visceral neuropathy, familial, 2, autosomal recessive, 619465;Glioblastoma, somatic, 137800
ERBB3	100% | 100%	96% | 96%	99% | 99%	?Lethal congenital contractural syndrome 2, 607598;{?Erythroleukemia, familial, susceptibility to}, 133180;Visceral neuropathy, familial, 1, autosomal recessive, 243180
ETFDH	92% | 92%	97% | 97%	99% | 99%	Glutaric acidemia IIC, 231680
EXOSC8	100% | 100%	96% | 96%	100% | 100%	Pontocerebellar hypoplasia, type 1C, 616081
EXOSC9	100% | 100%	98% | 98%	99% | 99%	Pontocerebellar hypoplasia, type 1D, 618065
FAT3	100% | 100%	98% | 98%	100% | 100%	
FBLN5	93% | 93%	96% | 96%	99% | 99%	Cutis laxa, autosomal recessive, type IA, 219100;Charcot-Marie-Tooth disease, demyelinating, type 1H, 619764;Macular degeneration, age-related, 3, 608895;?Cutis laxa, autosomal dominant 2, 614434
FBN2	99% | 99%	98% | 98%	99% | 99%	Macular degeneration, early-onset, 616118;Contractural arachnodactyly, congenital, 121050
FBXO38	100% | 100%	98% | 98%	100% | 100%	Neuronopathy, distal hereditary motor, autosomal dominant 6, 615575
FGD4	100% | 100%	97% | 97%	99% | 99%	Charcot-Marie-Tooth disease, type 4H, 609311
FIG4	98% | 98%	97% | 97%	100% | 100%	Yunis-Varon syndrome, 216340;?Polymicrogyria, bilateral temporooccipital, 612691;Amyotrophic lateral sclerosis 11, 612577;Charcot-Marie-Tooth disease, type 4J, 611228

FLVCR1	95% | 95%	97% | 97%	99% | 99%	Retinopathy-sensory neuropathy syndrome, 609033;Neurodevelopmental disorder with microcephaly, absent speech, and hypotonia, 621060
FXN	99% | 99%	92% | 91%	99% | 99%	Friedreich ataxia with retained reflexes, 229300;Friedreich ataxia, 229300
GALC	99% | 99%	96% | 96%	99% | 99%	Krabbe disease, 245200
GAN	100% | 100%	97% | 97%	99% | 99%	Giant axonal neuropathy-1, 256850
GARS1	99% | 99%	97% | 97%	99% | 99%	Spinal muscular atrophy, infantile, James type, 619042;Neuronopathy, distal hereditary motor, autosomal dominant 5, 600794;Charcot-Marie-Tooth disease, type 2D, 601472
GBA2	100% | 100%	97% | 97%	99% | 99%	Spastic paraplegia 46, autosomal recessive, 614409
GBE1	100% | 100%	98% | 98%	99% | 99%	Glycogen storage disease IV, 232500;Polyglucosan body disease, adult form, 263570
GBF1	100% | 100%	97% | 97%	99% | 99%	Charcot-Marie-Tooth disease, axonal, type 2GG, 606483
GDAP1	86% | 86%	95% | 95%	96% | 96%	Charcot-Marie-Tooth disease, axonal, with vocal cord paresis, 607706;Charcot-Marie-Tooth disease, recessive intermediate, A, 608340;Charcot-Marie-Tooth disease, axonal, type 2K, 607831;Charcot-Marie-Tooth disease, type 4A, 214400
GJB1	98% | 98%	97% | 97%	100% | 100%	Charcot-Marie-Tooth neuropathy, X-linked dominant, 1, 302800
GJB3	100% | 100%	94% | 94%	99% | 99%	Deafness, digenic, GJB2/GJB3, 220290;Erythrokeratodermia variabilis et progressiva 1, 133200;Deafness, autosomal dominant 2B, with or without peripheral neuropathy, 612644
GLA	91% | 91%	99% | 99%	100% | 100%	Fabry disease, cardiac variant, 301500;Fabry disease, 301500
GLE1	100% | 100%	95% | 95%	99% | 99%	Lethal congenital contracture syndrome 1, 253310;Congenital arthrogryposis with anterior horn cell disease, 611890
GNB4	100% | 100%	98% | 98%	99% | 99%	Charcot-Marie-Tooth disease, dominant intermediate F, 615185
GNE	100% | 100%	98% | 98%	99% | 99%	Sialuria, 269921;Thrombocytopenia 12 with or without myopathy, 620757;Nonaka myopathy, 605820
GSN	90% | 89%	97% | 97%	99% | 99%	Amyloidosis, Finnish type, 105120
HADHA	95% | 95%	98% | 98%	99% | 99%	HELLP syndrome, maternal, of pregnancy, 609016;LCHAD deficiency, 609016;Mitochondrial trifunctional protein deficiency 1, 609015;Fatty liver, acute, of pregnancy, 609016
HADHB	95% | 95%	97% | 97%	99% | 99%	Mitochondrial trifunctional protein deficiency 2, 620300
HARS1	93% | 93%	97% | 97%	99% | 99%	Charcot-Marie-Tooth disease, axonal, type 2W, 616625;Usher syndrome type 3B, 614504
HINT1	100% | 100%	97% | 97%	99% | 99%	Neuromyotonia and axonal neuropathy, autosomal recessive, 137200

HK1	96% | 96%	97% | 97%	99% | 99%	Anemia, congenital, nonspherocytic hemolytic, 5, hexokinase deficient, 235700;Retinitis pigmentosa 79, 617460;Neuropathy, hereditary motor and sensory, Russe type, 605285;Neurodevelopmental disorder with visual defects and brain anomalies, 618547
HMBS	100% | 100%	97% | 97%	99% | 99%	Leukoencephalopathy, porphyria-related, 620711;Encephalopathy, porphyria-related, 620704;Porphyria, acute intermittent, nonerythroid variant, 176000;Porphyria, acute intermittent, 176000
HNRNPA1	100% | 100%	98% | 98%	99% | 99%	?Inclusion body myopathy with early-onset Paget disease without frontotemporal dementia 3, 615424;?Myopathy, distal, 3, 610099;Amyotrophic lateral sclerosis 20, 615426
HOXD10	100% | 100%	97% | 97%	99% | 99%	Vertical talus, congenital, 192950;Charcot-Marie-Tooth disease, foot deformity of, 192950
HSD17B4	100% | 100%	96% | 96%	100% | 100%	D-bifunctional protein deficiency, 261515;Perrault syndrome 1, 233400
HSPB1	100% | 100%	96% | 96%	97% | 97%	Charcot-Marie-Tooth disease, axonal, type 2F, 606595;Neuronopathy, distal hereditary motor, autosomal dominant 3, 608634
HSPB3	99% | 99%	95% | 95%	98% | 98%	?Neuronopathy, distal hereditary motor, autosomal dominant 4, 613376
HSPB8	100% | 100%	97% | 97%	99% | 99%	Neuronopathy, distal hereditary motor, autosomal dominant 2, 158590;Charcot-Marie-Tooth disease, axonal, type 2L, 608673;Myopathy, myofibrillar, 13, with rimmed vacuoles, 621078
HYCC1	100% | 100%	98% | 98%	100% | 100%	Leukodystrophy, hypomyelinating, 5, 610532
IARS2	99% | 99%	98% | 98%	99% | 99%	Cataracts, growth hormone deficiency, sensory neuropathy, sensorineural hearing loss, and skeletal dysplasia, 616007
IFRD1	100% | 100%	97% | 97%	99% | 99%	
IGHMBP2	100% | 100%	96% | 96%	99% | 99%	Charcot-Marie-Tooth disease, axonal, type 2S, 616155;Neuronopathy, distal hereditary motor, autosomal recessive 1, 604320
INF2	98% | 98%	92% | 92%	96% | 96%	Glomerulosclerosis, focal segmental, 5, 613237;Charcot-Marie-Tooth disease, dominant intermediate E, 614455
INSC	94% | 94%	97% | 97%	99% | 99%	
ITPR3	100% | 100%	96% | 96%	99% | 99%	Charcot-Marie-Tooth disease, demyelinating, type 1J, 620111;Immunodeficiency 133 with ectodermal dysplasia with or without peripheral neuropathy, 621254
JAG1	100% | 100%	97% | 97%	99% | 99%	?Deafness, congenital heart defects, and posterior embryotoxon, 617992;Charcot-Marie-Tooth disease, axonal, type 2HH, 619574;Alagille syndrome 1, 118450;Tetralogy of Fallot, 187500
KARS1	94% | 94%	96% | 96%	99% | 99%	Deafness, autosomal recessive 89, 613916;Leukoencephalopathy, progressive, infantile-onset, with or without deafness, 619147;?Charcot-Marie-Tooth disease, recessive intermediate, B, 613641;Deafness, congenital, and adult-onset progressive leukoencephalopathy, 619196
KBTBD13	99% | 99%	95% | 95%	99% | 99%	Nemaline myopathy 6, autosomal dominant, 609273

KIF1A	100% | 100%	96% | 96%	98% | 98%	NESCAV syndrome, 614255;Neuropathy, hereditary sensory, type IIC, 614213;Spastic paraplegia 30, autosomal dominant, 610357;Spastic paraplegia 30, autosomal recessive, 620607
KIF1B	95% | 95%	97% | 97%	99% | 99%	{Neuroblastoma, susceptibility to, 1}, 256700;Charcot-Marie-Tooth disease, type 2A1, 118210
KIF5A	100% | 100%	96% | 96%	99% | 99%	Myoclonus, intractable, neonatal, 617235;{Amyotrophic lateral sclerosis, susceptibility to, 25}, 617921;Spastic paraplegia 10, autosomal dominant, 604187
KLC2	100% | 100%	96% | 96%	98% | 98%	Spastic paraplegia, optic atrophy, and neuropathy, 609541
LAMA2	100% | 100%	98% | 98%	100% | 100%	Muscular dystrophy, limb-girdle, autosomal recessive 23, 618138;Muscular dystrophy, congenital, merosin deficient or partially deficient, 607855
LITAF	99% | 99%	96% | 96%	99% | 99%	Charcot-Marie-Tooth disease, type 1C, 601098
LMNA	100% | 100%	96% | 96%	99% | 99%	Mandibuloacral dysplasia, 248370;Heart-hand syndrome, Slovenian type, 610140;Cardiomyopathy, dilated, 1A, 115200;Emery-Dreifuss muscular dystrophy 3, autosomal recessive, 616516;Restrictive dermopathy 2, 619793;Charcot-Marie-Tooth disease, type 2B1, 605588;Emery-Dreifuss muscular dystrophy 2, autosomal dominant, 181350;Hutchinson-Gilford progeria, 176670;Lipodystrophy, familial partial, type 2, 151660;Muscular dystrophy, congenital, 613205;Malouf syndrome, 212112
LRSAM1	99% | 99%	96% | 96%	99% | 99%	Charcot-Marie-Tooth disease, axonal, type 2P, 614436
MAG	100% | 100%	96% | 96%	99% | 99%	Spastic paraplegia 75, autosomal recessive, 616680
MARS1	89% | 89%	95% | 95%	99% | 99%	Spastic paraplegia 70, autosomal recessive, 620323;Interstitial lung and liver disease, 615486;?Trichothiodystrophy 9, nonphotosensitive, 619692;Charcot-Marie-Tooth disease, axonal, type 2U, 616280
MCM3AP	100% | 100%	97% | 97%	99% | 99%	Peripheral neuropathy, autosomal recessive, with or without impaired intellectual development, 618124
MFN2	100% | 100%	97% | 97%	99% | 99%	Lipomatosis, multiple symmetric, with or without peripheral neuropathy, 151800;Charcot-Marie-Tooth disease, axonal, type 2A2A, 609260;Charcot-Marie-Tooth disease, axonal, type 2A2B, 617087;Hereditary motor and sensory neuropathy VIA, 601152
MME	98% | 98%	98% | 98%	100% | 100%	?Spinocerebellar ataxia 43, 617018;Charcot-Marie-Tooth disease, axonal, type 2T, 617017
MORC2	100% | 100%	96% | 96%	100% | 100%	Charcot-Marie-Tooth disease, axonal, type 2Z, 616688;Developmental delay, impaired growth, dysmorphic facies, and axonal neuropathy, 619090
MPV17	100% | 100%	97% | 97%	98% | 98%	Charcot-Marie-Tooth disease, axonal, type 2EE, 618400;Mitochondrial DNA depletion syndrome 6 (hepatocerebral type), 256810
MPZ	100% | 100%	96% | 96%	98% | 98%	Charcot-Marie-Tooth disease, type 2I, 607677;Dejerine-Sottas disease, 145900;Charcot-Marie-Tooth disease, type 1B, 118200;Roussy-Levy syndrome, 180800;Charcot-Marie-Tooth disease, dominant intermediate D, 607791;Hypomyelinating neuropathy, congenital, 2, 618184;Charcot-Marie-Tooth disease, type 2J, 607736

MTMR2	100% | 100%	98% | 98%	100% | 100%	Charcot-Marie-Tooth disease, type 4B1, 601382
MTRFR	98% | 98%	96% | 96%	98% | 98%	Spastic paraplegia 55, autosomal recessive, 615035;Combined oxidative phosphorylation deficiency 7, 613559
MYH14	100% | 100%	96% | 96%	99% | 99%	?Peripheral neuropathy, myopathy, hoarseness, and hearing loss, 614369;Deafness, autosomal dominant 4A, 600652
MYO9B	100% | 100%	95% | 95%	98% | 98%	
MYOT	100% | 100%	98% | 98%	100% | 100%	Myopathy, myofibrillar, 3, 609200
NAGLU	100% | 100%	97% | 97%	97% | 97%	?Charcot-Marie-Tooth disease, axonal, type 2V, 616491;Mucopolysaccharidosis type IIIB (Sanfilippo B), 252920
NARS1	100% | 100%	98% | 98%	99% | 99%	Neurodevelopmental disorder with microcephaly, impaired language, epilepsy, and gait abnormalities, autosomal dominant, 619092;Neurodevelopmental disorder with microcephaly, impaired language, and gait abnormalities, autosomal recessive, 619091
NDRG1	100% | 100%	97% | 97%	99% | 99%	Charcot-Marie-Tooth disease, type 4D, 601455
NDUFA9	85% | 84%	97% | 97%	99% | 99%	Mitochondrial complex I deficiency, nuclear type 26, 618247
NDUFS6	83% | 81%	96% | 96%	99% | 99%	Mitochondrial complex I deficiency, nuclear type 9, 618232
NEFH	99% | 99%	91% | 91%	99% | 99%	Charcot-Marie-Tooth disease, axonal, type 2CC, 616924;{?Amyotrophic lateral sclerosis, susceptibility to}, 105400
NEFL	100% | 100%	95% | 95%	100% | 100%	Charcot-Marie-Tooth disease, type 1F, 607734;Charcot-Marie-Tooth disease, dominant intermediate G, 617882;Charcot-Marie-Tooth disease, type 2E, 607684
NEMF	100% | 100%	97% | 97%	99% | 99%	Intellectual developmental disorder with speech delay and axonal peripheral neuropathy, 619099
NFASC	100% | 100%	97% | 97%	99% | 99%	Neurodevelopmental disorder with central and peripheral motor dysfunction, 618356
NGF	100% | 100%	96% | 96%	100% | 100%	Neuropathy, hereditary sensory and autonomic, type V, 608654
NHERF1	86% | 86%	96% | 96%	98% | 98%	Nephrolithiasis/osteoporosis, hypophosphatemic, 2, 612287
NIPA1	99% | 99%	96% | 96%	99% | 98%	Spastic paraplegia 6, autosomal dominant, 600363
NMNAT2	100% | 100%	97% | 97%	99% | 99%	
NRG1	100% | 100%	97% | 97%	99% | 99%	
NTRK1	100% | 100%	94% | 94%	99% | 99%	Insensitivity to pain, congenital, with anhidrosis, 256800
PDHA1	88% | 88%	98% | 98%	99% | 99%	Pyruvate dehydrogenase E1-alpha deficiency, 312170
PDK3	99% | 99%	99% | 99%	100% | 100%	?Charcot-Marie-Tooth disease, X-linked dominant, 6, 300905
PDXK	89% | 87%	96% | 96%	98% | 98%	Neuropathy, hereditary motor and sensory, type VIC, with optic atrophy, 618511
PDYN	100% | 100%	97% | 97%	99% | 99%	Spinocerebellar ataxia 23, 610245

PEX1	100% | 100%	98% | 98%	99% | 99%	Heimler syndrome 1, 234580;Peroxisome biogenesis disorder 1B (NALD/IRD), 601539;Peroxisome biogenesis disorder 1A (Zellweger), 214100
PEX10	100% | 100%	96% | 96%	97% | 97%	Peroxisome biogenesis disorder 6A (Zellweger), 614870;Peroxisome biogenesis disorder 6B, 614871
PEX16	100% | 100%	96% | 96%	98% | 98%	Peroxisome biogenesis disorder 8B, 614877;Peroxisome biogenesis disorder 8A (Zellweger), 614876
PEX7	99% | 99%	97% | 97%	100% | 100%	Rhizomelic chondrodysplasia punctata, type 1, 215100;Peroxisome biogenesis disorder 9B, 614879
PHYH	100% | 100%	96% | 96%	98% | 98%	Refsum disease, 266500
PIEZO2	100% | 100%	97% | 97%	99% | 99%	Arthrogryposis, distal, type 5, 108145;Arthrogryposis, distal, with impaired proprioception and touch, 617146;Arthrogryposis, distal, type 3, 114300;?Marden-Walker syndrome, 248700
PIGB	100% | 100%	97% | 97%	99% | 99%	Developmental and epileptic encephalopathy 80, 618580;Acrofrontofacionasal dysplasia 1, 201180
PIGG	100% | 100%	97% | 97%	99% | 99%	[Blood group, EMM system], 619812;Neurodevelopmental disorder with or without hypotonia, seizures, and cerebellar atrophy, 616917
PLA2G6	100% | 99%	97% | 97%	93% | 87%	Neurodegeneration with brain iron accumulation 2B, 610217;Parkinson disease 14, 612953;Infantile neuroaxonal dystrophy 1, 256600
PLD3	100% | 100%	96% | 96%	98% | 98%	?Spinocerebellar ataxia 46, 617770
PLEKHG5	100% | 100%	95% | 95%	98% | 98%	Neuronopathy, distal hereditary motor, autosomal recessive 4, 611067;Charcot-Marie-Tooth disease, recessive intermediate C, 615376
PMM2	95% | 95%	97% | 97%	99% | 99%	Congenital disorder of glycosylation, type Ia, 212065
PMP2	100% | 100%	98% | 98%	99% | 99%	Charcot-Marie-Tooth disease, demyelinating, type 1G, 618279
PMP22	100% | 100%	97% | 97%	99% | 99%	Charcot-Marie-Tooth disease, type 1A, 118220;Roussy-Levy syndrome, 180800;Charcot-Marie-Tooth disease, type 1E, 118300;?Neuropathy, inflammatory demyelinating, 139393;Neuropathy, recurrent, with pressure palsies, 162500;Dejerine-Sottas disease, 145900
PNKP	100% | 100%	96% | 96%	97% | 97%	?Charcot-Marie-Tooth disease, type 2B2, 605589;Ataxia-oculomotor apraxia 4, 616267;Microcephaly, seizures, and developmental delay, 613402
PNPT1	100% | 100%	98% | 98%	99% | 99%	Spinocerebellar ataxia 25, 608703;Deafness, autosomal recessive 70, with or without adult-onset neurodegeneration, 614934;Combined oxidative phosphorylation deficiency 13, 614932
POLG	100% | 100%	97% | 97%	99% | 99%	Mitochondrial recessive ataxia syndrome (includes SANDO and SCAE), 607459;Mitochondrial DNA depletion syndrome 4B (MNGIE type), 613662;Mitochondrial DNA depletion syndrome 4A (Alpers type), 203700;Progressive external ophthalmoplegia, autosomal dominant 1, 157640;Progressive external ophthalmoplegia, autosomal recessive 1, 258450

POLG2	97% | 97%	97% | 97%	99% | 99%	Progressive external ophthalmoplegia with mitochondrial DNA deletions, autosomal dominant 4, 610131;?Mitochondrial DNA depletion syndrome 16 (hepatic type), 618528;?Mitochondrial DNA depletion syndrome 16B (neuroophthalmic type), 619425
POLR3A	100% | 100%	97% | 97%	99% | 99%	Wiedemann-Rautenstrauch syndrome, 264090;Leukodystrophy, hypomyelinating, 7, with or without oligodontia and/or hypogonadotropic hypogonadism, 607694
POLR3B	95% | 95%	97% | 97%	99% | 99%	Leukodystrophy, hypomyelinating, 8, with or without oligodontia and/or hypogonadotropic hypogonadism, 614381;Charcot-Marie-Tooth disease, demyelinating, type 1I, 619742
PRDM12	94% | 93%	95% | 95%	98% | 98%	Neuropathy, hereditary sensory and autonomic, type VIII, 616488
PRNP	100% | 100%	94% | 94%	99% | 99%	Spongiform encephalopathy with neuropsychiatric features, 606688;Gerstmann-Straussler disease, 137440;Huntington disease-like 1, 603218;Insomnia, fatal familial, 600072;{Kuru, susceptibility to}, 245300;Cerebral amyloid angiopathy, PRNP-related, 137440;Creutzfeldt-Jakob disease, 123400
PRPS1	100% | 100%	98% | 98%	100% | 100%	Arts syndrome, 301835;Phosphoribosylpyrophosphate synthetase superactivity, 300661;Charcot-Marie-Tooth disease, X-linked recessive, 5, 311070;Deafness, X-linked 1, 304500;Gout, PRPS-related, 300661
PRX	100% | 100%	96% | 96%	98% | 98%	Charcot-Marie-Tooth disease, type 4F, 614895;Dejerine-Sottas disease, 145900
PSAP	94% | 94%	97% | 97%	99% | 99%	Combined SAP deficiency, 611721;Krabbe disease, atypical, 611722;Metachromatic leukodystrophy due to SAP-b deficiency, 249900;Gaucher disease, atypical, 610539;{Parkinson disease 24, susceptibility to}, 619491
RAB7A	88% | 88%	96% | 96%	99% | 99%	Charcot-Marie-Tooth disease, type 2B, 600882
RCC1	100% | 100%	97% | 97%	98% | 98%	Infection-induced acute-onset axonal neuropathy, 621333
REEP1	87% | 87%	97% | 97%	99% | 99%	Neuronopathy, distal hereditary motor, autosomal recessive 6, 620011;Spastic paraplegia 31, autosomal dominant, 610250;?Neuronopathy, distal hereditary motor, autosomal dominant 12, 614751
RETREG1	91% | 91%	97% | 97%	99% | 99%	Neuropathy, hereditary sensory and autonomic, type IIB, 613115
RNF170	100% | 100%	97% | 97%	99% | 99%	Ataxia, sensory, 1, autosomal dominant, 608984;Spastic paraplegia 85, autosomal recessive, 619686
RTN2	100% | 100%	97% | 97%	98% | 98%	Neuronopathy, distal hereditary motor, autosomal recessive 11, with spasticity, 620854;Spastic paraplegia 12, autosomal dominant, 604805
SACS	99% | 99%	98% | 98%	99% | 99%	Spastic ataxia, Charlevoix-Saguenay type, 270550
SAMD9L	100% | 100%	98% | 98%	99% | 99%	Ataxia-pancytopenia syndrome, 159550;?Spinocerebellar ataxia 49, 619806;Monosomy 7 myelodysplasia and leukemia syndrome 1, 252270
SBF1	100% | 100%	97% | 97%	98% | 98%	Charcot-Marie-Tooth disease, type 4B3, 615284
SBF2	94% | 94%	98% | 98%	100% | 100%	Charcot-Marie-Tooth disease, type 4B2, 604563

SCARB2	100% | 100%	98% | 98%	99% | 99%	Epilepsy, progressive myoclonic 4, with or without renal failure, 254900
SCN10A	100% | 100%	97% | 97%	99% | 99%	Episodic pain syndrome, familial, 2, 615551
SCN11A	99% | 99%	96% | 96%	99% | 99%	Episodic pain syndrome, familial, 3, 615552;Neuropathy, hereditary sensory and autonomic, type VII, 615548
SCN9A	100% | 100%	98% | 98%	99% | 99%	Erythermalgia, primary, 133020;Insensitivity to pain, congenital, 243000;Small fiber neuropathy, 133020;Paroxysmal extreme pain disorder, 167400;Neuropathy, hereditary sensory and autonomic, type IID, 243000
SCO2	100% | 100%	96% | 96%	97% | 97%	Myopia 6, 608908;Mitochondrial complex IV deficiency, nuclear type 2, 604377
SCP2	96% | 96%	97% | 97%	99% | 99%	?Leukoencephalopathy with dystonia and motor neuropathy, 613724
SCYL1	100% | 100%	96% | 96%	97% | 97%	Spinocerebellar ataxia, autosomal recessive 21, 616719
SEPTIN9	98% | 98%	92% | 92%	98% | 98%	Amyotrophy, hereditary neuralgic, 162100
SETX	100% | 100%	97% | 97%	99% | 99%	Spinocerebellar ataxia, autosomal recessive, with axonal neuropathy 2, 606002;Amyotrophic lateral sclerosis 4, juvenile, 602433
SGPL1	96% | 96%	97% | 97%	99% | 99%	RENI syndrome, 617575
SH3TC2	100% | 100%	97% | 97%	100% | 100%	Charcot-Marie-Tooth disease, type 4C, 601596;Mononeuropathy of the median nerve, mild, 613353
SIGMAR1	100% | 100%	97% | 97%	98% | 98%	?Neuronopathy, distal hereditary motor, autosomal recessive 2, 605726;?Amyotrophic lateral sclerosis 16, juvenile, 614373
SLC12A6	100% | 100%	98% | 98%	99% | 99%	Agenesis of the corpus callosum with peripheral neuropathy, 218000;Charcot-Marie-Tooth disease, axonal, type 2II, 620068
SLC25A19	100% | 100%	96% | 96%	98% | 98%	Microcephaly, Amish type, 607196;Thiamine metabolism dysfunction syndrome 4 (progressive polyneuropathy type), 613710
SLC25A46	100% | 100%	97% | 97%	99% | 99%	Neuropathy, hereditary motor and sensory, type VIB, 616505;Pontocerebellar hypoplasia, type 1E, 619303
SLC52A2	100% | 100%	97% | 97%	97% | 95%	Brown-Vialetto-Van Laere syndrome 2, 614707
SLC52A3	99% | 99%	96% | 96%	99% | 99%	?Fazio-Londe disease, 211500;Brown-Vialetto-Van Laere syndrome 1, 211530
SLC5A6	99% | 99%	96% | 96%	99% | 99%	Sodium-dependent multivitamin transporter deficiency, 618973;Peripheral motor neuropathy, childhood-onset, biotin-responsive, 619903
SLC5A7	100% | 100%	98% | 98%	100% | 100%	Neuronopathy, distal hereditary motor, autosomal dominant 7, 158580;Myasthenic syndrome, congenital, 20, presynaptic, 617143
SOD1	96% | 96%	98% | 98%	99% | 99%	Spastic tetraplegia and axial hypotonia, progressive, 618598;Amyotrophic lateral sclerosis 1, 105400
SORD	75% | 72%	94% | 93%	99% | 99%	Neuronopathy, distal hereditary motor, autosomal recessive 8, 618912

SOX10	98% | 98%	95% | 95%	99% | 99%	Waardenburg syndrome, type 4C, 613266;PCWH syndrome, 609136;Waardenburg syndrome, type 2E, with or without neurologic involvement, 611584
SPAST	94% | 94%	96% | 96%	99% | 99%	Spastic paraplegia 4, autosomal dominant, 182601
SPG11	100% | 100%	97% | 97%	99% | 99%	Amyotrophic lateral sclerosis 5, juvenile, 602099;Charcot-Marie-Tooth disease, axonal, type 2X, 616668;Spastic paraplegia 11, autosomal recessive, 604360
SPG7	100% | 100%	96% | 96%	98% | 98%	Spastic paraplegia 7, autosomal recessive, 607259
SPTAN1	99% | 99%	97% | 97%	99% | 99%	Developmental delay with or without epilepsy, 620540;Developmental and epileptic encephalopathy 5, 613477;Spastic paraplegia 91, autosomal dominant, with or without cerebellar ataxia, 620538;Neuronopathy, distal hereditary motor, autosomal dominant 11, 620528
SPTBN4	100% | 100%	95% | 95%	99% | 99%	Neurodevelopmental disorder with hypotonia, neuropathy, and deafness, 617519
SPTLC1	75% | 75%	98% | 98%	99% | 99%	Amyotrophic lateral sclerosis 27, juvenile, 620285;Neuropathy, hereditary sensory and autonomic, type IA, 162400
SPTLC2	90% | 90%	97% | 97%	99% | 99%	Neuropathy, hereditary sensory and autonomic, type IC, 613640
SPTLC3	92% | 92%	97% | 97%	99% | 99%	
SURF1	100% | 100%	96% | 96%	99% | 99%	Charcot-Marie-Tooth disease, type 4K, 616684;Mitochondrial complex IV deficiency, nuclear type 1, 220110
SYT2	100% | 100%	97% | 97%	99% | 99%	Myasthenic syndrome, congenital, 7A, presynaptic, and distal motor neuropathy, autosomal dominant, 616040;Myasthenic syndrome, congenital, 7B, presynaptic, autosomal recessive, 619461
TBCE	97% | 97%	97% | 97%	98% | 98%	Kenny-Caffey syndrome, type 1, 244460;Myopathy with rigid spine, scoliosis, and male-limited hypogonadotropic hypogonadism, 621734;Hypoparathyroidism-retardation-dysmorphism syndrome, 241410;Encephalopathy, progressive, with amyotrophy and optic atrophy, 617207
TDP1	88% | 88%	98% | 98%	100% | 100%	?Spinocerebellar ataxia, autosomal recessive, with axonal neuropathy 1, 607250
TDRKH	100% | 100%	97% | 97%	99% | 99%	
TECPR2	100% | 100%	96% | 96%	99% | 99%	Neuropathy, hereditary sensory and autonomic, type IX, with developmental delay, 615031
TFG	100% | 100%	97% | 97%	100% | 100%	?Spastic paraplegia 57, autosomal recessive, 615658;Hereditary motor and sensory neuropathy, Okinawa type, 604484
TRIM2	96% | 96%	97% | 97%	99% | 99%	Charcot-Marie-Tooth disease, type 2R, 615490

TRPV4	100% | 100%	95% | 95%	99% | 99%	Neuronopathy, distal hereditary motor, autosomal dominant 8, 600175;Spondylometaphyseal dysplasia, Kozlowski type, 184252;Digital arthropathy-brachydactyly, familial, 606835;[Sodium serum level QTL 1], 613508;SED, Maroteaux type, 184095;Metatropic dysplasia, 156530;Scapuloperoneal spinal muscular atrophy, 181405;Hereditary motor and sensory neuropathy, type IIc, 606071;?Avascular necrosis of femoral head, primary, 2, 617383;Parastremmatic dwarfism, 168400;Brachyolmia type 3, 113500
TTR	100% | 100%	98% | 98%	100% | 100%	Amyloidosis, hereditary systemic 1, 105210;Carpal tunnel syndrome, familial, 115430;[Dystransthyretinemic hyperthyroxinemia], 145680
TUBB2A	94% | 92%	94% | 90%	99% | 99%	Cortical dysplasia, complex, with other brain malformations 5, 615763
TUBB3	100% | 100%	97% | 97%	99% | 99%	Congenital fibrosis of extraocular muscles 3A, syndromic 1, with anosmia and developmental delay, 621655;Congenital fibrosis of extraocular muscles 3A2, syndromic, with joint contractures, developmental delay, and peripheral neuropathy, 621666;Fibrosis of extraocular muscles, congenital, 3A, 600638;Cortical dysplasia, complex, with other brain malformations 1, 614039
TWNK	100% | 100%	97% | 97%	99% | 99%	Mitochondrial DNA depletion syndrome 7 (hepatocerebral type), 271245;Progressive external ophthalmoplegia with mitochondrial DNA deletions, autosomal dominant 3, 609286;Perrault syndrome 5, 616138
TYMP	100% | 100%	96% | 96%	98% | 98%	Mitochondrial DNA depletion syndrome 1 (MNGIE type), 603041
UBA5	90% | 90%	98% | 98%	99% | 99%	?Spinocerebellar ataxia, autosomal recessive 24, 617133;Developmental and epileptic encephalopathy 44, 617132
UBE3C	95% | 95%	97% | 97%	99% | 99%	Neurodevelopmental disorder with absent speech and movement and behavioral abnormalities, 620270
UCHL1	100% | 100%	98% | 98%	99% | 99%	{?Parkinson disease 5, susceptibility to}, 613643;Spastic paraplegia 79A, autosomal dominant, 620221;Spastic paraplegia 79B, autosomal recessive, 615491
UQCRC1	100% | 100%	97% | 97%	99% | 99%	Parkinsonism with polyneuropathy, 619279
VCP	99% | 99%	97% | 97%	100% | 100%	Frontotemporal dementia and/or amyotrophic lateral sclerosis 6, 613954;Charcot-Marie-Tooth disease, type 2Y, 616687;Inclusion body myopathy with early-onset Paget disease and frontotemporal dementia 1, 167320
VRK1	98% | 98%	98% | 98%	100% | 100%	Pontocerebellar hypoplasia type 1A, 607596;Neuronopathy, distal hereditary motor, autosomal recessive 10, 620542
VWA1	99% | 99%	96% | 96%	95% | 95%	Neuronopathy, distal hereditary motor, autosomal recessive 7, 619216
WARS1	92% | 92%	96% | 96%	99% | 99%	Neuronopathy, distal hereditary motor, autosomal dominant 9, 617721;Neurodevelopmental disorder with microcephaly and speech delay, with or without brain abnormalities, 620317
WNK1	100% | 100%	96% | 96%	99% | 99%	Neuropathy, hereditary sensory and autonomic, type II, 201300;Pseudohypoaldosteronism, type IIC, 614492
XRCC1	100% | 100%	94% | 94%	99% | 99%	?Spinocerebellar ataxia, autosomal recessive 26, 617633

YARS1	99% | 98%	97% | 97%	99% | 99%	Infantile-onset multisystem neurologic, endocrine, and pancreatic disease 2, 619418;Charcot-Marie-Tooth disease, dominant intermediate C, 608323
ZFYVE26	100% | 100%	97% | 97%	99% | 99%	Spastic paraplegia 15, autosomal recessive, 270700