

# GeneAware™ (version 4) Reproductive Carrier Screen

BAYLOR  
GENETICS

GeneAware is a reproductive carrier test that screens for disease-causing variants in over 400 genes through full gene sequencing, supplemented with copy number analysis and fragile X triplet repeat analysis

The risk for carrying certain genetic conditions varies from patient to patient based on several factors. Because of this diversity, we offer five different GeneAware panels to better meet the needs of your patients.

In all five panel options, individuals are screened for cystic fibrosis (CFTR) and spinal muscular atrophy (SMN1). In addition, females are screened for X-linked Duchenne and Becker muscular dystrophies (DMD) and Fragile X syndrome (FMR1).

ACMG AND ACOG	Disorders recommended for screening by the ACMG and ACOG
ASHKENAZI JEWISH	Disorders specific for individuals of Ashkenazi Jewish descent
BASIC	The most commonly requested disorders
COMPLETE	A selection of common disorders
EXPANDED	The most comprehensive screening

Gene	Disease Name
AAAS	Triple A syndrome
ABAT	GABA-transaminase deficiency
ABCA12	Congenital ichthyosis, ABCA12-related
ABCA3	Surfactant dysfunction, ABCA3-related
ABCA4	ABCA4-related disorders
ABCB11	Progressive familial intrahepatic cholestasis 2
ABCB4	Progressive familial intrahepatic cholestasis 3
ABCC2	Dubin-Johnson syndrome
ABCC6	Pseudoxanthoma elasticum
ABCC8	Familial hyperinsulinism, ABCC8-related
ABCD1	Adrenoleukodystrophy, X-linked
ACAD9	Mitochondrial complex I deficiency, ACAD9-related
ACADM	Medium chain acyl-CoA dehydrogenase deficiency

Gene	Disease Name
ACADVL	Very long-chain acyl-CoA dehydrogenase deficiency
ACAT1	Beta-ketothiolase deficiency
ACOX1	Peroxisomal acyl-CoA oxidase deficiency
ACSF3	Combined malonic and methylmalonic aciduria
ADA	Adenosine deaminase deficiency
ADAMTS2	Ehlers-Danlos syndrome, dermatosparaxis type
ADAMTSL4	ADAMTSL4-related eye disorders
ADGRG1	Bilateral frontoparietal polymicrogyria
ADGRV1	Usher syndrome, type 2C
AFF2	Fragile XE syndrome
AGA	Aspartylglycosaminuria
AGL	Glycogen storage disease, type III
AGPS	Rhizomelic chondrodyplasia punctata, type 3
AGXT	Primary hyperoxaluria, type I

Gene	Disease Name
AHI1	Joubert syndrome 3
AIFM1	Combined oxidative phosphorylation deficiency 6
AIPL1	Leber congenital amaurosis 4
AIRE	Autoimmune polyglandular syndrome, type 1
ALDH3A2	Sjogren-Larsson syndrome
ALDH7A1	Pyridoxine-dependent epilepsy
ALDOB	Hereditary fructose intolerance
ALG1	Congenital disorder of glycosylation, type I $\kappa$
ALG13	Developmental and epileptic encephalopathy 36
ALG6	Congenital disorder of glycosylation, type I $\alpha$
ALMS1	Alstrom syndrome
ALPL	Hypophosphatasia
AMN	Imerslund-Gräsbeck syndrome 2
AMT	Glycine encephalopathy, AMT-related
ANO10	Autosomal recessive spinocerebellar ataxia, type 10
AP1S1	MEDNIK syndrome
AP3B1	Hermansky-Pudlak syndrome, type 2
AQP2	Nephrogenic diabetes insipidus
AR	Androgen insensitivity syndrome
ARG1	Argininemia
ARL13B	Joubert syndrome 8
ARL6	Bardet-Biedl syndrome 3
ARSA	Metachromatic leukodystrophy, ARSA-related
ARSB	Mucopolysaccharidosis, type VI / Maroteaux-Lamy syndrome
ARSL	X-linked chondrodysplasia punctata 1
ARX	X-linked developmental disorders, ARX-related

Gene	Disease Name
ASAHI	Farber lipogranulomatosis
ASL	Argininosuccinic aciduria
ASNS	Asparagine synthetase deficiency
ASPA	Canavan disease
ASS1	Citrullinemia, type I
ATM	Ataxia-telangiectasia
ATP6V1B1	Renal tubular acidosis and deafness, ATP6V1B1-related
ATP7A	Menkes disease
ATP7B	Wilson disease
ATP8B1	Progressive familial intrahepatic cholestasis 1 and benign familial intrahepatic cholestasis 1
ATRX	Alpha-thalassemia intellectual disability syndrome, X-linked
AVPR2	AVPR2-related disorders
B9D1	Joubert syndrome 27
B9D2	Joubert syndrome 34
BBS1	Bardet-Biedl syndrome 1
BBS10	Bardet-Biedl syndrome 10
BBS12	Bardet-Biedl syndrome 12
BBS2	Bardet-Biedl syndrome 2
BBS4	Bardet-Biedl syndrome 4
BBS5	Bardet-Biedl syndrome 5
BBS7	Bardet-Biedl syndrome 7
BBS9	Bardet-Biedl syndrome 9
BCHE	Pseudocholinesterase deficiency
BCKDHA	Maple syrup urine disease, type 1A
BCKDHB	Maple syrup urine disease, type 1B
BCS1L	GRACILE syndrome
BLM	Bloom syndrome
BLOC1S3	Hermansky-Pudlak syndrome, type 8

Gene	Disease Name	Gene	Disease Name
BLOC1S6	Hermansky-Pudlak syndrome, type 9	CEP290	Leber congenital amaurosis, CEP290-related / CEP290-related conditions
BMP1	Osteogenesis imperfecta, type XIII	CEP41	Joubert syndrome 15
BRIP1	Fanconi anemia, complementation group J	CERKL	Retinitis pigmentosa 26
BSND	Bartter syndrome, type 4A	CFTR	Cystic fibrosis
BTD	Biotinidase deficiency	CHAT	Congenital myasthenic syndrome, CHAT-related
BTK	X-linked agammaglobulinemia	CHM	Choroideremia, X-linked
C2CD3	Orofaciodigital syndrome, type XIV	CHRNE	Congenital myasthenic syndrome, CHRNE-related
CAD	Developmental and epileptic encephalopathy 50	CHRNG	Multiple pterygium syndrome, lethal type
CANT1	Desbuquois dysplasia, type I	CIB2	Usher syndrome, type 1J
CAPN3	Limb-girdle muscular dystrophy, type 2A	CIITA	Bare lymphocyte syndrome, type II
CASQ2	Catecholaminergic polymorphic ventricular tachycardia, type 2	CLCN1	Myotonia congenita
CBS	Homocystinuria, CBS-related	CLCN5	Dent disease
CC2D1A	Autosomal recessive intellectual developmental disorder, type 3	CLN3	Neuronal ceroid lipofuscinosis, CLN3-related
CC2D2A	Joubert syndrome 9	CLN5	Neuronal ceroid lipofuscinosis, CLN5-related
CCDC103	Primary ciliary dyskinesia, CCDC103-related	CLN6	Neuronal ceroid lipofuscinosis, CLN6-related
CCDC39	Primary ciliary dyskinesia, CCDC39-related	CLN8	Neuronal ceroid lipofuscinosis, CLN8-related
CCDC88C	Congenital hydrocephalus 1	CLRN1	Usher syndrome, type 3A
CCN6	Progressive pseudorheumatoid dysplasia	CNGB3	Achromatopsia, CNGB3-related
CD3D	Severe combined immunodeficiency, CD3D-related	COL11A2	COL11A2-related disorders
CD3E	Severe combined immunodeficiency, CD3E-related	COL17A1	Junctional epidermolysis bullosa, COL17A1-related
CD40	Hyper-IgM syndrome, type 3	COL27A1	Steel syndrome
CD40LG	X-Linked hyper IgM syndrome	COL4A3	Alport syndrome, COL4A3-related
CD59	CD59-mediated hemolytic anemia	COL4A4	Alport syndrome, COL4A4-related
CDH23	Usher syndrome, type 1D	COL4A5	Alport syndrome, COL4A5-related, X-linked
CEP104	Joubert syndrome 25	COL7A1	Dystrophic epidermolysis bullosa, COL7A1-related
CEP120	Joubert syndrome 31	COLQ	Congenital myasthenic syndrome, COLQ-related
CEP152	CEP152-related disorders		

Gene	Disease Name	Gene	Disease Name
COX15	Mitochondrial complex IV deficiency, nuclear type 6	CYP7B1	CYP7B1-related disorders
CPLANE1	Joubert syndrome 17	DBT	Maple syrup urine disease, type 2
CPS1	Carbamoyl phosphate synthetase I deficiency	DCAF17	Woodhouse-Sakati syndrome
CPT1A	Carnitine palmitoyltransferase I deficiency	DCLRE1C	Omenn syndrome
CPT2	Carnitine palmitoyltransferase II deficiency	DCX	DCX-related disorders
CRB1	CRB1-related retinal dystrophies	DDX11	Warsaw breakage syndrome
CRPPA	Muscular dystrophy-dystroglycanopathy, type A, 7	DGAT1	DGAT1 deficiency
CRTAP	Osteogenesis imperfecta, type VII	DGUOK	Deoxyguanosine kinase deficiency / Mitochondrial DNA depletion syndrome 3
CSPP1	Joubert syndrome 21	DHCR7	Smith-Lemli-Opitz syndrome
CTNS	Cystinosis	DHDDS	Retinitis pigmentosa 59
CTSA	Galactosialidosis	DIS3L2	Perlman syndrome
CTSC	CTSC-related disorders	DKC1	Dyskeratosis congenita, X-linked
CTSD	Neuronal ceroid lipofuscinosis, CTSD-related	DLD	Dihydrolipoamide dehydrogenase deficiency
CTSK	Pycnodynatosi	DLL3	Spondylocostal dysostosis 1
CYBA	Chronic granulomatous disease 4	DMD	Duchenne/Becker muscular dystrophy, X-linked
CYBB	Chronic granulomatous disease, X-linked	DNAH11	Primary ciliary dyskinesia, DNAH11-related
CYP11A1	Congenital adrenal insufficiency, CYP11A1-related	DNAH5	Primary ciliary dyskinesia, DNAH5-related
CYP11B1	Congenital adrenal hyperplasia (CAH) due to 11-beta-hydroxylase deficiency	DNAI1	Primary ciliary dyskinesia, DNAI1-related
CYP11B2	Corticosterone methyloxidase deficiency	DNAI2	Primary ciliary dyskinesia, DNAI2-related
CYP17A1	Congenital adrenal hyperplasia (CAH) due to 17-alpha-hydroxylase deficiency	DNMT3B	Immunodeficiency-centromeric instability-facial anomalies syndrome 1
CYP19A1	Aromatase deficiency	DOK7	Congenital myasthenic syndrome, DOK7-related
CYP1B1	Primary congenital glaucoma	DPYD	Dihydropyrimidine dehydrogenase deficiency
CYP21A2	Congenital adrenal hyperplasia (CAH) due to 21-hydroxylase deficiency	DUOX2	Thyroid dyshormonogenesis 6
CYP27A1	Cerebrotendinous xanthomatosis	DYNC2H1	Short-rib thoracic dysplasia 3 with or without polydactyly
CYP27B1	Vitamin D-dependent rickets, type 1A	DYSF	Limb-girdle muscular dystrophy, type 2B
		EDA	Hypohidrotic ectodermal dysplasia, X-linked
		EIF2AK3	Wolcott-Rallison syndrome

Gene	Disease Name
EIF2B1	Leukoencephalopathy with vanishing white matter 1
EIF2B2	Leukoencephalopathy with vanishing white matter 2
EIF2B3	Leukoencephalopathy with vanishing white matter 3
EIF2B4	Leukoencephalopathy with vanishing white matter 4
EIF2B5	Leukoencephalopathy with vanishing white matter 5
ELP1	Familial dysautonomia
EMD	Emery-Dreifuss muscular dystrophy, X-linked
EPG5	EPG5-related disorder
ERCC2	ERCC2-related conditions
ERCC6	Cerebrooculofacioskeletal syndrome 1 / Cockayne syndrome, type B
ERCC8	Cockayne syndrome, type A
ESCO2	Roberts-SC phocomelia syndrome
ETFA	Multiple acyl-CoA dehydrogenase deficiency / Glutaric aciduria, type IIA
ETFB	Multiple acyl-CoA dehydrogenase deficiency / Glutaric aciduria, type IIB
ETFDH	Multiple acyl-CoA dehydrogenase deficiency / Glutaric aciduria, type IIC
ETHE1	Ethylmalonic encephalopathy
EVC	Ellis-van Creveld syndrome
EVC2	Ellis-van Creveld syndrome
EXOSC3	Pontocerebellar hypoplasia, type 1B
EYS	Retinitis pigmentosa 25
F11	Factor XI deficiency / Hemophilia C
F2	Factor II deficiency / Prothrombin deficiency
F5	Factor V deficiency
F8	Factor VIII deficiency / Hemophilia A
F9	Factor IX deficiency / Hemophilia B

Gene	Disease Name
FAH	Tyrosinemia, type I
FAM161A	Retinitis pigmentosa 28
FANCA	Fanconi anemia, complementation group A
FANCB	Fanconi anemia, complementation group B
FANCC	Fanconi anemia, complementation group C
FANCD2	Fanconi anemia, complementation group D2
FANCE	Fanconi anemia, complementation group E
FANCF	Fanconi anemia, complementation group F
FANCG	Fanconi anemia, complementation group G
FANCI	Fanconi anemia, complementation group I
FANCL	Fanconi anemia, complementation group L
FBP1	Fructose-1,6-bisphosphatase deficiency
FBXO7	Parkinson disease 15
FH	Fumarate deficiency
FHL1	FHL1-related disorders
FKBP10	Osteogenesis imperfecta, type XI
FKRP	Limb-girdle muscular dystrophy, type 2I / Muscular dystrophy-dystroglycanopathy, type A, 5
FKTN	Fukuyama congenital muscular dystrophy
FM03	Trimethylaminuria
FMR1	Fragile X syndrome
FOXN1	Severe combined immunodeficiency, FOXN1-related
FOXP3	Immunodysregulation, polyendocrinopathy, and enteropathy, X-linked
FOXRED1	Mitochondrial complex I deficiency, nuclear type 19
FRAS1	Fraser syndrome, type 1
FREM2	Fraser syndrome, type 2
FUCA1	Fucosidosis

Gene	Disease Name	Gene	Disease Name
FXN	Friedreich ataxia	GLDC	Glycine encephalopathy / Nonketotic hyperglycinemia
G6PC1	Glycogen storage disease, type Ia	GLE1	Lethal congenital contracture syndrome 1
G6PC3	G6PC3 deficiency	GNE	GNE myopathy
G6PD	Glucose-6-phosphate dehydrogenase deficiency	GNPAT	Rhizomelic chondrodysplasia punctata, type 2
GAA	Glycogen storage disease, type II / Pompe disease	GNPTAB	Mucolipidosis II and mucolipidosis III alpha/beta
GALC	Krabbe disease	GNPTG	Mucolipidosis III gamma
GALE	Galactosemia, type III / Galactose epimerase deficiency	GNS	Mucopolysaccharidosis, type IIID / Sanfilippo syndrome D
GALK1	Galactosemia, type II / Galactokinase deficiency	GORAB	Geroderma osteodysplastica
GALNS	Mucopolysaccharidosis, type IVA / Morquio syndrome	GP1BA	Bernard-Soulier syndrome, type A
GALNT3	Hyperphosphatemic familial tumoral calcinosis	GP9	Bernard-Soulier syndrome, type C
GALT	Galactosemia	GRHPR	Primary hyperoxaluria, type II
GAMT	Guanidinoacetate methyltransferase deficiency	GRIP1	Fraser syndrome, type 3
GATM	Arginine:glycine amidinotransferase deficiency	GSS	Glutathione synthetase deficiency
GBA	Gaucher disease	GUCY2D	Leber congenital amaurosis 1
GBE1	Glycogen storage disease, type IV / Adult polyglucosan body disease	GUSB	Mucopolysaccharidosis, type VII / Sly syndrome
GCDH	Glutaric acidemia, type I	HADH	3-hydroxyacyl-CoA dehydrogenase deficiency
GCH1	GCH1-related disorders	HADHA	Long chain 3-hydroxyacyl-CoA dehydrogenase deficiency
GDF5	GDF5-related disorders	HADHB	Mitochondrial trifunctional protein deficiency, HADHB-related
GFM1	Combined oxidative phosphorylation deficiency 1	HAMP	Hereditary hemochromatosis, type 2B
GHR	Laron syndrome	HAX1	Congenital neutropenia, HAX1-related
GJB1	Charcot-Marie-Tooth disease, type 1X	HBA1/HBA2	Alpha-thalassemia
GJB2	Nonsyndromic hearing loss and deafness (DFNB) 1	HBB	Beta hemoglobinopathies
GLA	Fabry disease, X-linked	HCFC1	Methylmalonic aciduria and homocystinuria, cblX type
GLB1	GLB1-related disorders	HEXA	Tay-Sachs disease

Gene	Disease Name
HEXB	Sandhoff disease
HGD	Alkaptonuria
HGSNAT	Mucopolysaccharidosis, type IIIC / Sanfilippo syndrome C
HJV	Hereditary hemochromatosis, type 2
HLCS	Holocarboxylase synthetase deficiency
HMGCL	3-hydroxy-3-methylglutaryl-CoA lyase deficiency
HMOX1	Heme oxygenase 1 deficiency
HOGA1	Primary hyperoxaluria, type III
HPD	Tyrosinemia, type III
HPRT1	HPRT1-related disorders
HPS1	Hermansky-Pudlak syndrome, type 1
HPS3	Hermansky-Pudlak syndrome, type 3
HPS4	Hermansky-Pudlak syndrome, type 4
HPS5	Hermansky-Pudlak syndrome, type 5
HPS6	Hermansky-Pudlak syndrome, type 6
HSD17B10	HSD10 disease
HSD17B3	17-beta-hydroxysteroid dehydrogenase deficiency, type III
HSD17B4	D-bifunctional protein deficiency
HSD3B2	3-beta-hydroxysteroid dehydrogenase deficiency, type II
HYAL1	Mucopolysaccharidosis, type IX / Hyaluronidase deficiency
HYLS1	Hydrolethalus syndrome
IDS	Mucopolysaccharidosis, type II / Hunter syndrome
IDUA	Mucopolysaccharidosis, type I / Hurler syndrome
IGHMBP2	IGHMBP2-related disorders
IKBKB	Severe combined immunodeficiency, IKBKB-related

Gene	Disease Name
IL2RG	Severe combined immunodeficiency, X-linked
IL7R	Severe combined immunodeficiency, IL7R-related
INPP5E	Joubert syndrome 1
INVS	Nephronophthisis 2
IQCB1	Senior-Loken syndrome 5
ITGA6	Junctional epidermolysis bullosa, ITGA6-related
ITGB3	ITGB3-related disorders
ITGB4	Junctional epidermolysis bullosa, ITGB4-related
IVD	Isovaleric acidemia
JAK3	Severe combined immunodeficiency, JAK3-related
KCNJ1	Bartter syndrome, type 2
KCNJ11	Familial hyperinsulinism, KCNJ11-related
L1CAM	L1 syndrome
LAMA2	LAMA2 muscular dystrophy
LAMA3	Junctional epidermolysis bullosa, LAMA3-related
LAMB3	Junctional epidermolysis bullosa, LAMB3-related
LAMC2	Junctional epidermolysis bullosa, LAMC2-related
LARGE1	Muscular dystrophy-dystroglycanopathy, type A, 6
LCA5	Leber congenital amaurosis 5
LDLR	Familial hypercholesterolemia, LDLR-related
LDLRAP1	Familial hypercholesterolemia, LDLRAP1-related
LHX3	Combined pituitary hormone deficiency, type 3
LIFR	Stuve-Wiedemann syndrome
LIG4	LIG4 syndrome
LIPA	Lysosomal acid lipase deficiency

Gene	Disease Name	Gene	Disease Name
LMBRD1	Methylmalonic aciduria and homocystinuria, cblF type	MLYCD	Malonyl-CoA decarboxylase deficiency
LOXHD1	Nonsyndromic hearing loss and deafness (DFNB) 77	MMAA	Methylmalonic aciduria, MMAA-related
LPL	Lipoprotein lipase deficiency	MMAB	Methylmalonic aciduria, MMAB-related
LRAT	LRAT-related disorders	MMACHC	Combined methylmalonic aciduria and homocystinuria, cblC type / Cobalamin C deficiency
LRP2	Donnai-Barrow syndrome	MMADHC	Combined methylmalonic aciduria and homocystinuria, cblD type / Cobalamin D deficiency
LRPPRC	Mitochondrial complex IV deficiency, nuclear type 5 / Leigh syndrome, French-Canadian type	MMUT	Methylmalonic aciduria, MMUT-related
LYST	Chediak-Higashi syndrome	MOCS1	Molybdenum cofactor deficiency of complementation group A
MAK	Retinitis pigmentosa 62	MOCS2	Molybdenum cofactor deficiency of complementation group B
MAN2B1	Alpha-mannosidosis	MPI	Congenital disorder of glycosylation, type Ib
MANBA	Beta-mannosidosis	MPL	Congenital amegakaryocytic thrombocytopenia
MCCC1	3-methylcrotonyl-CoA carboxylase 1 deficiency	MPV17	MPV17-related mitochondrial DNA (mtDNA) maintenance defect
MCCC2	3-methylcrotonyl-CoA carboxylase 2 deficiency	MRE11	Ataxia-telangiectasia-like disorder 1
MCEE	Methylmalonyl-CoA epimerase deficiency	MTHFR	Homocystinuria caused by methylenetetrahydrofolate reductase (MTHFR) deficiency
MCOLN1	Mucolipidosis IV	MTM1	X-linked myotubular myopathy
MCPH1	Autosomal recessive primary microcephaly 1	MTR	Homocystinuria-megaloblastic anemia, cblG type
MECR	MECR-related neurologic disorder	MTTR	Homocystinuria, type cblE
MED17	Infantile cerebral and cerebellar atrophy	MTTP	Abetalipoproteinemia
MEFV	Familial Mediterranean fever	MUSK	Congenital myasthenic syndrome, MUSK-related
MESP2	Spondylothoracic dysostosis and spondylocostal dysostosis 2	MVK	Mevalonic aciduria / Hyper-IgD syndrome
MFSD8	Neuronal ceroid lipofuscinosis, MFSD8-related	MYO15A	Nonsyndromic hearing loss and deafness (DFNB) 3
MID1	X-linked Opitz G/BBB syndrome	MYO7A	Usher syndrome, type 1B
MKKS	Bardet-Biedl syndrome 6	NAGA	Schindler disease
MKS1	MKS1-related disorders	NAGLU	Mucopolysaccharidosis, type IIIB / Sanfilippo syndrome B
MLC1	Megalencephalic leukoencephalopathy with subcortical cysts	NAGS	N-acetylglutamate synthase deficiency
		NBN	Nijmegen breakage syndrome

Gene	Disease Name	Gene	Disease Name
NCF2	Chronic granulomatous disease 2	OAT	Ornithine aminotransferase deficiency
NDRG1	Charcot-Marie-Tooth disease, type 4D	OCA2	Oculocutaneous albinism, type II
NDUFAF2	Mitochondrial complex I deficiency, nuclear type 10	OCRL	Lowe syndrome, X-linked
NDUFAF5	Mitochondrial complex I deficiency, nuclear type 16	OPA3	3-methylglutaconic aciduria, type III / Costeff syndrome
NDUFAF6	Mitochondrial complex I deficiency, nuclear type 17	OSTM1	Osteopetrosis, OSTM1-related
NDUFS4	Mitochondrial complex I deficiency, nuclear type 1	OTC	Ornithine transcarbamylase deficiency, X-linked
NDUFS6	Mitochondrial complex I deficiency, nuclear type 9	OTOA	Nonsyndromic hearing loss and deafness (DFNB) 22
NDUFS7	Mitochondrial complex I deficiency, nuclear type 3	OTOF	Nonsyndromic hearing loss and deafness (DFNB) 9
NDUFV1	Mitochondrial complex I deficiency, nuclear type 4	P3H1	Osteogenesis imperfecta, type VIII
NEB	Nemaline myopathy 2	PAH	Phenylalanine hydroxylase deficiency
NEU1	Sialidosis	PANK2	Pantothenate kinase-associated neurodegeneration
NGLY1	Congenital disorder of deglycosylation, type 1	PC	Pyruvate carboxylase deficiency
NPC1	Niemann-Pick disease, type C1	PCBD1	Pterin-4 alpha-carbinolamine dehydratase (PCD) deficiency
NPC2	Niemann-Pick disease, type C2	PCCA	Propionic acidemia, PCCA-related
NPHP1	NPHP1 nephronophthisis-related ciliopathies	PCCB	Propionic acidemia, PCCB-related
NPHP3	NPHP3 nephronophthisis-related ciliopathies	PCDH15	Usher syndrome, type 1F
NPHP4	NPHP4 nephronophthisis-related ciliopathies	PCNT	Microcephalic osteodysplastic primordial dwarfism, type II
NPHS1	Steroid resistant nephrotic syndrome, type 1	PDHA1	Pyruvate dehydrogenase E1-alpha deficiency
NPHS2	Steroid-resistant nephrotic syndrome, type 2	PDHB	Pyruvate dehydrogenase E1-beta deficiency
NR0B1	X-linked congenital adrenal hypoplasia	PEPD	Prolidase deficiency
NR2E3	Enhanced S-cone syndrome	PET100	Mitochondrial complex IV deficiency, nuclear type 12
NSMCE3	Lung disease, immunodeficiency, and chromosome breakage syndrome (LICS)	PEX1	Zellweger spectrum disorders, PEX1-related
NTRK1	Congenital insensitivity to pain with anhidrosis	PEX10	Zellweger spectrum disorders, PEX10-related
		PEX12	Zellweger spectrum disorders, PEX12-related
		PEX13	Zellweger spectrum disorder, PEX13-related
		PEX16	Zellweger spectrum disorder, PEX16-related

Gene	Disease Name
PEX2	Zellweger spectrum disorders, PEX2-related
PEX26	Zellweger spectrum disorders, PEX26-related
PEX5	Zellweger spectrum disorder, PEX5-related
PEX6	Zellweger spectrum disorders, PEX6-related
PEX7	Rhizomelic chondrodysplasia punctata, type 1
PFKM	Glycogen storage disease, type VII
PGM3	PGM3-congenital disorder of glycosylation / Immunodeficiency 23
PHGDH	Phosphoglycerate dehydrogenase deficiency
PHKB	Glycogen storage disease, type IXb
PHKG2	Glycogen storage disease, type IXc
PHYH	Refsum disease
PIGN	PIGN-related disorders
PJVK	Nonsyndromic hearing loss and deafness (DFNB) 59
PKHD1	Autosomal recessive polycystic kidney disease
PLA2G6	PLA2G6-associated neurodegeneration
PLCE1	Steroid-resistant nephrotic syndrome, type 3
PLEKHG5	PLEKHG5-related disorders
PLOD1	PLOD1-related kyphoscoliotic Ehlers-Danlos syndrome
PLP1	PLP1-related disorders
PMM2	Congenital disorder of glycosylation, type Ia
PNPO	Pyridoxamine 5'-phosphate oxidase deficiency
POLG	POLG-related disorders
POLH	Xeroderma pigmentosum, variant type (XP-V)
POMGNT1	Muscular dystrophy-dystroglycanopathy, type A, 3
POMT1	Muscular dystrophy-dystroglycanopathy, type A, 1
POMT2	Muscular dystrophy-dystroglycanopathy, type A, 2
POR	Cytochrome P450 oxidoreductase deficiency
POU1F1	Combined or isolated pituitary hormone deficiency, type 1

Gene	Disease Name
PPT1	Neuronal ceroid lipofuscinosis, PPT1-related
PRCD	Retinitis pigmentosa 36
PRDM5	Brittle cornea syndrome 2
PRF1	Familial hemophagocytic lymphohistiocytosis 2
PROP1	Combined pituitary hormone deficiency, type 2
PRPS1	PRPS1-related disorders
PSAP	Metachromatic leukodystrophy due to saposin B deficiency
PTPRC	Severe combined immunodeficiency, PTPRC-related
PTS	6-pyruvoyl-tetrahydropterin synthase deficiency
PUS1	Myopathy, lactic acidosis, and sideroblastic anemia
PYGM	Glycogen storage disease, type V
QDPR	Dihydropteridine reductase (DHPR) deficiency
RAB23	Carpenter syndrome
RAG1	Severe combined immunodeficiency, RAG1-related
RAG2	Severe combined immunodeficiency, RAG2-related
RAPSN	Congenital myasthenic syndrome, RAPSN-related
RARS2	Pontocerebellar hypoplasia, type 6
RDH12	Leber congenital amaurosis 13
RLBP1	RLBP1-related retinopathies
RMRP	Cartilage-hair hypoplasia
RNASEH2A	Aicardi-Goutieres syndrome 4
RNASEH2B	Aicardi-Goutieres syndrome 2
RNASEH2C	Aicardi-Goutieres syndrome 3
RP2	Retinitis pigmentosa 2
RPE65	Leber congenital amaurosis 2
RPGR	Retinitis pigmentosa 3
RPGRIP1L	Ciliopathies, RPGRIP1L-related
RS1	Juvenile retinoschisis, X-linked
RTEL1	Dyskeratosis congenita, RTEL1-related
RXYLT1	Muscular dystrophy-dystroglycanopathy, type A, 10

Gene	Disease Name	Gene	Disease Name
RYR1	RYR1-related disorders	SLC37A4	Glycogen storage disease, type Ib / IIw
SACS	Spastic ataxia, Charlevoix-Saguenay type	SLC38A8	Foveal hypoplasia 2
SAMD9	Normophosphatemic familial tumoral calcinosis	SLC39A4	Acrodermatitis enteropathica
SAMHD1	Aicardi-Goutieres syndrome 5	SLC45A2	Oculocutaneous albinism, type IV
SBDS	Shwachman-Diamond syndrome	SLC4A11	Corneal dystrophy and perceptive deafness syndrome
SCARB2	Action myoclonus renal failure syndrome	SLC4A4	Renal tubular acidosis
SCO2	Mitochondrial complex IV deficiency, nuclear type 2	SLC5A5	Thyroid dyshormonogenesis 1
SEC23B	Congenital dyserythropoietic anemia, type II	SLC6A8	Creatine transporter defect, SLC6A8-related, X-linked / Cerebral creatine deficiency syndrome
SEPSECS	Progressive cerebello-cerebral atrophy	SLC7A7	Lysinuric protein intolerance
SERPINA1	Alpha-1 antitrypsin deficiency	SMARCAL1	Schimke immunoosseous dysplasia
SGCA	Limb-girdle muscular dystrophy, type 3	SMN1	Spinal muscular atrophy
SGCB	Limb-girdle muscular dystrophy, type 4	SMPD1	Niemann-Pick disease, types A/B
SGCD	Limb-girdle muscular dystrophy, type 6	SNAP29	Cerebral dysgenesis, neuropathy, ichthyosis, and palmoplantar keratoderma (CEDNIK) syndrome
SGCG	Limb-girdle muscular dystrophy, type 5	SPG11	SPG11-related disorders
SGSH	Mucopolysaccharidosis, type IIIA / Sanfilippo syndrome A	SPR	Sepiapterin reductase deficiency
SKIC2	Trichohepatoenteric syndrome 2	SRD5A2	5-alpha-reductase deficiency
SLC12A1	Bartter syndrome, type 1	ST3GAL5	Amish infantile epilepsy syndrome
SLC12A3	Gitelman syndrome	STAR	Lipoid congenital adrenal hyperplasia
SLC12A6	Agenesis of the corpus callosum with peripheral neuropathy	STX11	Familial hemophagocytic lymphohistiocytosis 4
SLC17A5	Free sialic acid storage disorders	STXBP2	Familial hemophagocytic lymphohistiocytosis 5
SLC19A2	Thiamine-responsive megaloblastic anemia syndrome	SUMF1	Multiple sulfatase deficiency
SLC19A3	Biotin-thiamine-responsive basal ganglia disease	SUOX	Isolated sulfite oxidase deficiency
SLC1A4	Spastic tetraplegia, thin corpus callosum, and progressive microcephaly	SURF1	SURF1-related disorders
SLC22A5	Carnitine deficiency, systemic primary	SYNE4	Nonsyndromic hearing loss and deafness (DFNB) 76
SLC25A13	Citrin deficiency / Citrullinemia, type II	TAFAZZIN (formerly TAZ)	Barth syndrome
SLC25A15	Ornithine translocase deficiency	TANGO2	Recurrent metabolic crises with rhabdomyolysis, cardiac arrhythmias, and neurodegeneration
SLC25A20	Carnitine-acylcarnitine translocase deficiency	TAT	Tyrosinemia, type II
SLC26A2	Skeletal dysplasia, SLC26A2-related	TBCD	Early-onset progressive encephalopathy with brain atrophy and thin corpus callosum
SLC26A3	Congenital secretory chloride diarrhea 1	TBCE	TBCE-related disorders
SLC26A4	Pendred syndrome		
SLC27A4	Ichthyosis prematurity syndrome		
SLC35A3	Arthrogryposis, mental retardation, and seizures		

<b>Gene</b>	<b>Disease Name</b>
TCIRG1	Osteopetrosis, infantile malignant, TCIRG1-related
TCN2	Transcobalamin II deficiency
TECPR2	TECPR2-related hereditary sensory and autonomic neuropathy with intellectual disability
TERT	Dyskeratosis congenita spectrum disorders
TF	Atransferrinemia
TFR2	Hereditary hemochromatosis, type 3
TG	Thyroid dyshormonogenesis 3
TGM1	Autosomal recessive congenital ichthyosis
TH	Tyrosine hydroxylase deficiency
TJP2	Progressive familial intrahepatic cholestasis 4
TK2	TK2-related mitochondrial disorders
TMC1	Nonsyndromic hearing loss and deafness (DFNB) 7
TMEM216	Joubert syndrome 2
TMEM67	TMEM67-related disorders
TMPRSS3	Nonsyndromic hearing loss and deafness (DFNB) 8
TNXB	TNXB-related classical-like Ehlers-Danlos syndrome
TPO	Thyroid dyshormonogenesis 2A
TPP1	Neuronal ceroid lipofuscinosis, TPP1-related
TREX1	TREX1-related disorders
TRIM32	TRIM32-related disorders
TRIM37	Mulibrey nanism
TRMU	Acute infantile liver failure
TSEN2	Pontocerebellar hypoplasia, type 2B
TSEN54	Pontocerebellar hypoplasia, types 4 and 2A
TSFM	Combined oxidative phosphorylation deficiency 3

<b>Gene</b>	<b>Disease Name</b>
TSHB	Congenital hypothyroidism, TSHB-related
TSHR	Congenital hypothyroidism, TSHR-related
TTC37	Trichohepatoenteric syndrome 1
TTC8	Bardet-Biedl syndrome 8
TTPA	Ataxia with isolated vitamin E deficiency
TULP1	TULP1-related disorders
TYMP	Mitochondrial DNA depletion syndrome 1, MNGIE type
TYR	Oculocutaneous albinism, type I
TYRP1	Oculocutaneous albinism, type III
UBA1	X-linked infantile spinal muscular atrophy
UBR1	Johanson-Blizzard syndrome
UNC13D	Familial hemophagocytic lymphohistiocytosis 3
UPB1	Beta-ureidopropionase deficiency
USH1C	Usher syndrome, type 1C
USH2A	Usher syndrome, type 2A
VDR	Vitamin D-resistant rickets, type 2A
VLDLR	VLDLR-associated cerebellar hypoplasia
VPS11	Hypomyelinating leukodystrophy 12
VPS13A	Choreoacanthocytosis
VPS13B	Cohen syndrome
VPS45	Severe congenital neutropenia 5
VPS53	Pontocerebellar hypoplasia, type 2E
VRK1	Pontocerebellar hypoplasia, type 1A
VSX2	Microphthalmia / Anophthalmia
WAS	Wiskott-Aldrich syndrome, X-linked
WNT10A	Odonto-onycho-dermal dysplasia / Schopf-Schulz-Passarge syndrome
WRN	Werner syndrome
WWOX	WWOX deficiency
XPA	Xeroderma pigmentosum, group A
XPC	Xeroderma pigmentosum, group C
ZBTB24	Immunodeficiency-centromeric instability-facial anomalies syndrome 2
ZFYVE26	Spastic paraparesis, type 15
ZIC3	X-linked heterotaxy-1
ZNF469	Brittle cornea syndrome 1

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