

LIST OF DISEASES ANALYZED BY preconGEN

11-Beta-Hydroxylase-Deficient Congenital Adrenal Hyperplasia (CYP11B1)	Bardet-Biedl Syndrome, BBS10-Related (BBS10)	Congenital Disorder of Glycosylation, Type Ia (PMM2)	Fragile X Syndrome (FMR1)* X-linked
21-Hydroxylase-Deficient Congenital Adrenal Hyperplasia (CYP21A2)*	Bardet-Biedl Syndrome, BBS12-Related (BBS12)	Congenital Disorder of Glycosylation, Type Ib (MPI)	Galactokinase Deficiency (GALK1)
6-Pyruvoyl-Tetrahydropterin Synthase Deficiency (PTS)	Bardet-Biedl Syndrome, BBS2-Related (BBS2)	Congenital Disorder of Glycosylation, Type Ic (ALG6)	Galactosemia (GALT)
ABCC8-Related Hyperinsulinism (ABCC8)	Beta-Sarcoglycanopathy (including Limb-Girdle Muscular Dystrophy, Type 2E) (SGCB)	Congenital Finnish Nephrosis (NPHS1)	Gamma-Sarcoglycanopathy (SGCG)
Adenosine Deaminase Deficiency (ADA)	Biotinidase Deficiency (BTD)	Costeff Optic Atrophy Syndrome (OPA3)	Gaucher Disease (GBA)* ACMG
Adrenoleukodystrophy: X-Linked (ABCD1) X-linked	Bloom Syndrome (BLM) ACMG	Cystic Fibrosis (CFTR) ACOG ACMG	GJB2-Related DFNB1 Nonsyndromic Hearing Loss and Deafness (including two GJB6 deletions) (GJB2)
Alpha Thalassemia (HBA1/HBA2)* ACOG ACMG	Calpainopathy (CAPN3)	Cystinosis (CTNS)	GLB1-Related Disorders (GLB1)
Alpha-Mannosidosis (MAN2B1)	Canavan Disease (ASPA) ACOG ACMG	D-Bifunctional Protein Deficiency (HSD17B4)	GLDC-Related Glycine Encephalopathy (GLDC)
Alpha-Sarcoglycanopathy (including Limb-Girdle Muscular Dystrophy, Type 2D) (SGCA)	Carbamoylphosphate Synthetase I Deficiency (CPS1)	Delta-Sarcoglycanopathy (SGCD)	Glutaric Acidemia, Type 1 (GCDH)
Alport Syndrome, X-Linked (COL4A5) X-linked	Carnitine Palmitoyltransferase IA Deficiency (CPT1A)	Dysferlinopathy (DYSF)	Glycogen Storage Disease, Type Ia (G6PC)
Alstrom Syndrome (ALMS1)	Carnitine Palmitoyltransferase II Deficiency (CPT2)	Dystrophinopathies (including Duchenne / Becker Muscular Dystrophy) (DMD) X-linked	Glycogen Storage Disease, Type Ib (SLC37A4)
AMT-Related Glycine Encephalopathy (AMT)	Cartilage-Hair Hypoplasia (RMRP)	ERCC6-Related Disorders (ERCC6)	Glycogen Storage Disease, Type III (AGL)
Andermann Syndrome (SLC12A6)	Cerebrotendinous Xanthomatosis (CYP27A1)	ERCC8-Related Disorders (ERCC8)	GNPTAB-Related Disorders (GNPTAB)
Argininemia (ARG1)	Citrullinemia, Type 1 (ASS1)	EVC-Related Ellis-Van Creveld Syndrome (EVC)	GRACILE Syndrome (BCS1L)
Argininosuccinic Aciduria (ASL)	CLN3-Related Neuronal Ceroid Lipofuscinosis (CLN3)	EVC2-Related Ellis-Van Creveld Syndrome (EVC2)	HADHA-Related Disorders (including Long Chain 3-Hydroxyacyl-CoA Dehydrogenase Deficiency) (HADHA)
ARSACS (SACS)	CLN5-Related Neuronal Ceroid Lipofuscinosis (CLN5)	Fabry Disease (GLA) X-linked	Hb Beta Chain-Related Hemoglobinopathy (including Beta Thalassemia and Sickle Cell Disease) (HBB) ACOG
Aspartylglycosaminuria (AGA)	CLN6-Neuronal Ceroid Lipofuscinosis, Type 6 (CLN6)	Familial Dysautonomia (IKBKAP) ACOG ACMG	Hereditary Fructose Intolerance (ALDOB)
Ataxia with Vitamin E Deficiency (TTPA)	Cohen Syndrome (VPS13B)	Familial Mediterranean Fever (MEFV)	Herlitz Junctional Epidermolysis Bullosa, LAMA3-Related (LAMA3)
Ataxia-Telangiectasia (ATM)	COL4A3-Related Alport Syndrome (COL4A3)	Fanconi Anemia Complementation, Group A (FANCA)	Herlitz Junctional Epidermolysis Bullosa, LAMB3-Related (LAMB3)
ATP7A-Related Disorders (ATP7A) X-linked	COL4A4-Related Alport Syndrome (COL4A4)	Fanconi Anemia, Type C (FANCC) ACMG	Herlitz Junctional Epidermolysis Bullosa, LAMC2-Related (LAMC2)
Autosomal Recessive Osteopetrosis, Type 1 (TCIRG1)		FKRP-Related Disorders (FKRP)	
Bardet-Biedl Syndrome, BBS1-Related (BBS1)		FKTN-Related Disorders (including Walker-Warburg Syndrome) (FKTN)	

Hexosaminidase A Deficiency (including Tay-Sachs Disease) (HEXA) ACOG ACMG	Methylmalonic Acidemia, cblA Type (MMAA)	PCDH15-Related Disorders (including Usher Syndrome, Type 1F) (PCDH15)	Short Chain Acyl-CoA Dehydrogenase Deficiency (ACADS)
HMG-CoA Lyase Deficiency (HMGCL)	Methylmalonic Acidemia, cblB Type (MMAB)	Pendred Syndrome (SLC26A4)	Sjogren-Larsson Syndrome (ALDH3A2)
Holocarboxylase Synthetase Deficiency (HLC5)	Methylmalonic Aciduria and Homocystinuria, cblC Type (MMACHC)	Peroxisome Biogenesis Disorder, Type 3 (PEX12)	Smith-Lemli-Opitz Syndrome (DHCR7)
Homocystinuria caused by Cystathionine Beta-Synthase Deficiency (CBS)	MKS1-Related Disorders (MKS1)	Peroxisome Biogenesis Disorder, Type 4 (PEX6)	Spastic Paraplegia, Type 15 (ZFYVE26)
Hydroletharus Syndrome (HYLS1)	Mucopolidosis III Gamma (GNPTG)	Peroxisome Biogenesis Disorder, Type 5 (PEX2)	Spinal Muscular Atrophy (SMN1)* ACMG
Hypophosphatasia, Autosomal Recessive (ALPL)	Mucopolidosis IV (MCOLN1) ACMG	Peroxisome Biogenesis Disorder, Type 6 (PEX10)	Spondylothoracic Dysostosis (MESP2)
Inclusion Body Myopathy 2 (GNE)	Mucopolysaccharidosis, Type I (including Hurler Syndrome) (IDUA)	PEX1-Related Zellweger Syndrome Spectrum (PEX1)	Steroid-Resistant Nephrotic Syndrome (NPHS2)
Isovaleric Acidemia (IVD)	Mucopolysaccharidosis, Type II (IDS) X-linked	Phenylalanine Hydroxylase Deficiency (PAH)	Sulfate Transporter-Related Osteochondrodysplasia (SLC26A2)
Joubert Syndrome 2 (TMEM216)	Mucopolysaccharidosis, Type IIIA (SGSH)	PKHD1-Related Autosomal Recessive Polycystic Kidney Disease (PKHD1)	TGM1-Related Autosomal Recessive Congenital Ichthyosis (TGM1)
KCNJ11-Related Familial Hyperinsulinism (KCNJ11)	Mucopolysaccharidosis, Type IIIB (NAGLU)	Polyglandular Autoimmune Syndrome, Type 1 (AIRE)	TPP1-Related Neuronal Ceroid Lipofuscinosis (TPP1)
Krabbe Disease (GALC)	Mucopolysaccharidosis, Type IIIC (HGSNAT)	Pompe Disease (GAA)	Tyrosinemia, Type I (FAH)
LAMA2-Related Muscular Dystrophy (LAMA2)	Muscle-Eye-Brain Disease (POMGNT1)	PPT1-Related Neuronal Ceroid Lipofuscinosis (PPT1)	Tyrosinemia, Type II (TAT)
Leigh Syndrome, French-Canadian Type (LRPPRC)	MUT-Related Methylmalonic Acidemia (MUT)	Primary Carnitine Deficiency (SLC22A5)	USH1C-Related Disorders (USH1C)
Lipoamide Dehydrogenase Deficiency (DLD)	MYO7A-Related Disorders (MYO7A)	Primary Hyperoxaluria, Type 1 (AGXT)	USH2A-Related Disorders (USH2A)
Lipoid Congenital Adrenal Hyperplasia (STAR)	NEB-Related Nemaline Myopathy (NEB)	Primary Hyperoxaluria, Type 2 (GRHPR)	Usher Syndrome, Type 3 (CLRN1)
Lysosomal Acid Lipase Deficiency (LIPA)	Niemann-Pick Disease, Type C (NPC1)	Primary Hyperoxaluria, Type 3 (HOGA1)	Very Long Chain Acyl-CoA Dehydrogenase Deficiency (ACADVL)
Maple Syrup Urine Disease, Type Ia (BCKDHA)	Niemann-Pick Disease, Type C2 (NPC2)	PROPI-Related Combined Pituitary Hormone Deficiency (PROPI)	Wilson Disease (ATP7B)
Maple Syrup Urine Disease, Type IB (BCKDHB)	Niemann-Pick Disease, SMPD1-Associated (SMPD1) ACMG	Pycnodysostosis (CTSK)	X-Linked Congenital Adrenal Hypoplasia (NROB1) X-linked
Maple Syrup Urine Disease, Type II (DBT)	Nijmegen Breakage Syndrome (NBN)	Pyruvate Carboxylase Deficiency (PC)	X-Linked Juvenile Retinoschisis (RS1) X-linked
Medium Chain Acyl-CoA Dehydrogenase Deficiency (ACADM)	Northern Epilepsy (CLN8)	Rhizomelic Chondrodysplasia Punctata, Type 1 (PEX7)	X-Linked Myotubular Myopathy (MTM1) X-linked
Megalencephalic Leukoencephalopathy with Subcortical Cysts (MLC1)	Ornithine Transcarbamylase Deficiency (OTC) X-linked	RTEL1-Related Disorders (RTEL1)	X-Linked Severe Combined Immunodeficiency (IL2RG) X-linked
Metachromatic Leukodystrophy (ARSA)	PCCA-Related Propionic Acidemia (PCCA)	Salla Disease (SLC17A5)	Xeroderma Pigmentosum, Group A (XPA)
	PCCB-Related Propionic Acidemia (PCCB)	Sandhoff Disease (HEXB)	Xeroderma Pigmentosum, Group C (XPC)
		Segawa Syndrome (TH)	

ACOG Indicates testing recommended by ACOG (American College of Obstetricians and Gynecologists)

ACMG Indicates testing recommended by ACMG (American College of Medical Genetics and Genomics)

X-linked Indicates X-linked disorders

* Use of differentiating specialized technology (technically challenging genes)

Diseases included on the donor panel



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