

# **Donor 7280**

# **Genetic Testing Summary**

Fairfax Cryobank recommends reviewing this genetic testing summary with your healthcare provider to determine suitability.

Last Updated: 09/16/2025

Donor Reported Ancestry: English, Swedish, Norwegian, Russian Jewish Ancestry: No

Genetic Test*	Result	Comments/
		Donor's Residual Risk**
Chromosome analysis (karyotype)	Normal male karyotype	No evidence of clinically significant
		chromosome abnormalities
Hemoglobin evaluation	Normal hemoglobin fractionation and	Reduced risk to be a carrier for sickle
	MCV/MCH results	cell anemia, beta thalassemia, alpha
		thalassemia trait (aa/ and a-/a-) and
		other hemoglobinopathies
Expanded Genetic Disease Carrier	Carrier: Trichohepatoenteric	Partner testing is recommended before
Screening Panel attached- 549 diseases	Syndrome, SKIC2-Related	using this donor.
by gene sequencing.		
	Negative for other genes sequenced.	
Special Testing		
Gene(s): IFT140	Negative through gene sequencing	
	with deletion and duplication analysis	

<sup>\*</sup>No single test can screen for all genetic disorders. A negative screening result significantly reduces, but cannot eliminate, the risk for these conditions in a pregnancy.

<sup>\*\*</sup>Donor residual risk is the chance the donor is still a carrier after testing negative.

Patient Name: Donor 7280

Date Of Birth:

Gender: Ma

Ethnicity: Northern European

Caucasian

Patient ID: N/A

Medical Record #: Collection Kit:

Accession ID: N/A

Case File ID:

**Test Information** 

Sample Received:

Ordering Physician:

Clinic Information: Fairfax Cryobank

Phone: N/A

Report Date: 07/28/2024 Sample Collected: 07/11/2024

Sample Type: Blood

horizon<sup>™</sup>
natera carrier screen

## CARRIER SCREENING REPORT

ABOUT THIS SCREEN: Horizon™ is a carrier screen for specific autosomal recessive and X-linked diseases. This information can help patients learn their risk of having a child with specific genetic conditions.

**ORDER SELECTED:** The Horizon Custom

panel was ordered for this patient. Males are not screened for X-linked diseases

FINAL RESULTS SUMMARY:

07/12/2024

CARRIER for Trichohepatoenteric Syndrome, SKIC2-Related

Positive for the likely pathogenic variant c.2476C>T (p.Q826\*) in the SKIC2 gene. If this individual's partner is a carrier for TRICHOHEPATOENTERIC SYNDROME, SKIC2-RELATED, their chance to have a child with this condition may be as high as 1 in 4 (25%). Carrier screening for this individual's partner is suggested.

Negative for 548 out of 549 diseases

No other pathogenic variants were detected in the genes that were screened. The patient's remaining carrier risk after the negative screening results is listed for each disease/gene on the Horizon website at <a href="https://www.natera.com/panel-option/h-all/">https://www.natera.com/panel-option/h-all/</a>. Please see the following pages of this report for a comprehensive list of all conditions included on this individual's screen.

Carrier screening is not diagnostic and may not detect all possible pathogenic variants in a given gene.

#### RECOMMENDATIONS

Individuals who would like to review their Horizon report with a Natera Laboratory Genetic Counselor may schedule a telephone genetic information session by calling 650-249-9090 or visiting naterasession.com. Clinicians with questions may contact Natera at 650-249-9090 or email support@natera.com. Individuals with positive results may wish to discuss these results with family members to allow them the option to be screened. Comprehensive genetic counseling to discuss the implications of these test results and possible associated reproductive risk is recommended.

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J. Dianne Keen-Kim, Ph.D., FACMGG



Patient Name: Donor 7280

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# **VARIANT DETAILS**

# SKIC2, c.2476C>T (p.Q826\*), heterozygous, likely pathogenic

- The c.2476C>T (p.Q826\*) variant in the SKIC2 gene has not been observed in the gnomAD v2.1.1 dataset.
- This premature termination variant is predicted to cause nonsense-mediated decay (NMD) in a gene where loss-of-function is a known mechanism of disease.
- This variant has not been described in ClinVar.



Patient Name:

**Test Information** 

Ordering Physician:



Clinic Information:

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#### **DISEASES SCREENED**

Below is a list of all diseases screened and the result. Certain conditions have unique patient-specific numerical values, therefore, results for those conditions are formatted differently.

#### **Autosomal Recessive**

17-BETA HYDROXYSTEROID DEHYDROGENASE 3 DEFICIENCY (HSD17B3) negative

3-BETA-HYDROXYSTEROID DEHYDROGENASE TYPE II DEFICIENCY (HSD3B2) negative 3-HYDROXY-3-METHYLGLUTARYL-COENZYME A LYASE DEFICIENCY (HMGCL) negative 3-HYDROXYACYL-COA DEHYDROGENASE DEFICIENCY (HADH) negative 3-METHYLCROTONYL-CoA CARBOXYLASE 2 DEFICIENCY (MCCC2) negative 3-PHOSPHOGLYCERATE DEHYDROGENASE DEFICIENCY (PHGDH) negative

5-ALPHA-REDUCTASE DEFICIENCY (SRD5A2) negative

6-PYRUVOYL-TETRAHYDROPTERIN SYNTHASE ( PTPS ) DEFICIENCY (PTS) negative

ABCA4-RELATED CONDITIONS (ABCA4) negative ABETALIPOPROTEINEMIA (MTTP) negative ACHONDROGENESIS, TYPE 1B (SLC26A2) negative ACHROMATOPSIA, CNGB3-RELATED (CNGB3) negative ACRODERMATITIS ENTEROPATHICA (SLC39A4) negative

ACTION MYOCLONUS-RENAL FAILURE (AMRF) SYNDROME (SCARB2) negative

ACUTE INFANTILE LIVER FAILURE, TRMU-RELATED (TRMU) negative ACYL-COA OXIDASE I DEFICIENCY (ACOX1) negative AICARDI-GOUTIÈRES SYNDROME (SAMHD1) negative

AICARDI-GOUTIERES SYNDROME, RNASEH2A-RELATED (RNASEH2A) negative AICARDI-GOUTIERES SYNDROME, RNASEH2B-RELATED (RNASEH2B) negative AICARDI-GOUTIERES SYNDROME, RNASEH2C-RELATED (RNASEH2C) negative

AICARDI-GOUTIÈRES SYNDROME, TREX1-RELATED (TREX1) negative

ALPHA-MANNOSIDOSIS (MAN2B1) negative ALPHA-THALASSEMIA (HBA1/HBA2) negative ALPORT SYNDROME, COL4A3-RELATED (COL4A3) negative

ALPORT SYNDROME, COL4A4-RELATED (COL4A4) negative ALSTROM SYNDROME (ALMS1) negative AMISH INFANTILE EPILEPSY SYNDROME (573GAL5) negative

ANDERMANN SYNDROME (SLC12A6) negative

ARGININE:GLYCINE AMIDINOTRANSFERASE DEFICIENCY (AGAT DEFICIENCY)

ARGININE. SETCINE AMIDINO FRANSFERASE DEFICIENCY (GATM) negative
ARGININEMIA (ARG1) negative
ARGININOSUCCINATE LYASE DEFICIENCY (ASL) negative
AROMATASE DEFICIENCY (CYP19A1) negative
ASPARAGINE SYNTHETASE DEFICIENCY (ASNS) negative

ASPARTAGINE SYNTHETASE DEFICIENCY (ASMS) negative
ASPARTYLGLYCOSAMINURIA (AGA) negative
ATAXIA WITH VITAMIN E DEFICIENCY (TTPA) negative
ATAXIA-TELANGIECTASIA (ATM) negative
ATAXIA-TELANGIECTASIA-LIKE DISORDER 1 (MRE11) negative

ATRANSFERRINEMIA (TF) negative
AUTISM SPECTRUM, EPILEPSY AND ARTHROGRYPOSIS (SLC35A3) negative

AUTOIMMUNE POLYGLANDULAR SYNDROME, TYPE 1 (AIRE) negative AUTOSOMAL RECESSIVE CONGENITAL ICHTHYOSIS (ARCI), SLC27A4-RELATED

(SLC27A4) negative

AUTOSOMAL RECESSIVE SPASTIC ATAXIA OF CHARLEVOIX-SAGUENAY (SACS) negative

BARDET-BIEDL SYNDROME, ARL6-RELATED (ARL6) negative BARDET-BIEDL SYNDROME, BBS10-RELATED (BBS10) negative BARDET-BIEDL SYNDROME, BBS10-RELATED (BBS10) negative BARDET-BIEDL SYNDROME, BBS12-RELATED (BBS12) negative BARDET-BIEDL SYNDROME, BBS1-RELATED (BBS1) negative BARDET-BIEDL SYNDROME, BBS2-RELATED (BBS2) negative BARDET-BIEDL SYNDROME, BBS4-RELATED (BBS4) negative BARDET-BIEDL SYNDROME, BBS5-RELATED (BBS5) negative BARDET-BIEDL SYNDROME, BBS7-RELATED (BBS5) negative BARDET-BIEDL SYNDROME, BBS7-RELATED (BBS5) negative BARDET-BIEDL SYNDROME, BBS7-RELATED (BBS5) negative BARDET-BIEDL SYNDROME, TTC8-RELATED (TTC8) negative BART LYMPHOCYTE SYNDROME, CIITA-RELATED (CIITA) negative BARTTER SYNDROME, BSND-RELATED (BSND) negative BARTTER SYNDROME, KCNJ1-RELATED (KCNJ1) negative BARTTER SYNDROME, SLC12A1-RELATED (SLC12A1) negative BATTEN DISEASE, CLN3-RELATED (CLN3) negative BETA-HEMOGLOBINOPATHIES (HBB) negative BETA-KETOTHIOLASE DEFICIENCY (ACAT1) negative BETA-MANNOSIDOSIS (MANBA) negative
BETA-UREIDOPROPIONASE DEFICIENCY (UPB1) negative BILATERAL FRONTOPARIETAL POLYMICROGYRIA (GPR56) negative BIOTINIDASE DEFICIENCY (BTD) negative BIOTIN-THIAMINE-RESPONSIVE BASAL GANGLIA DISEASE (BTBGD) (SLC19A3) negative BLOOM SYNDROME (BLM) negative BRITTLE CORNEA SYNDROME 1 (ZNF469) negative BRITTLE CORNEA SYNDROME 2 (PRDM5) negative

CANAVAN DISEASE (ASPA) negative CARBAMOYL PHOSPHATE SYNTHETASE I DEFICIENCY (CPS1) negative

CARNITINE DEFICIENCY (SLC22A5) negative
CARNITINE PALMITOYLTRANSFERASE IA DEFICIENCY (CPT1A) negative
CARNITINE PALMITOYLTRANSFERASE II DEFICIENCY (CPT2) negative

CARNITINE-ACYLCARNITINE TRANSLOCASE DEFICIENCY (SLC25A20) negative

CARPENTER SYNDROME (RAB23) negative
CARTILAGE-HAIR HYPOPLASIA (RMRP) negative
CATECHOLAMINERGIC POLYMORPHIC VENTRICULAR TACHYCARDIA (CASQ2) negative

CD59-MEDIATED HEMOLYTIC ANEMIA (CD59) negative CEP152-RELATED MICROCEPHALY (CEP152) negative CEREBRAL DYSGENESIS, NEUROPATHY, ICHTHYOSIS, AND PALMOPLANTAR

KERATODERMA (CEDNIK) SYNDROME (SNAP29) negative
CEREBROTENDINOUS XANTHOMATOSIS (CYP27A1) negative
CHARCOT-MARIE-TOOTH DISEASE, RECESSIVE INTERMEDIATE C (PLEKHG5) negative

CHARCOT-MARIE-TOOTH-DISEASE, TYPE 4D (NDRG1) negative

CHEDIAK-HIGASHI SYNDROME (LYST) negative CHOREOACANTHOCYTOSIS (VPS13A) negative CHRONIC GRANULOMATOUS DISEASE, CYBA-RELATED (CYBA) negative

CHRONIC GRANULOMATOUS DISEASE, NCF2-RELATED (NCF2) negative CILIOPATHIES, RPGRIP1L-RELATED (RPGRIP1L) negative CITRIN DEFICIENCY (SLC25A13) negative

CITRULLINEMIA, TYPE 1 (ASS1) negative

CLN10 DISEASE (CTSD) negative COHEN SYNDROME (VPS13B) negative

COHEN STADROME (VP513B) negative
COL11A2-RELATED CONDITIONS (COL11A2) negative
COMBINED MALONIC AND METHYLMALONIC ACIDURIA (ACSF3) negative
COMBINED OXIDATIVE PHOSPHORYLATION DEFICIENCY 1 (GFM1) negative
COMBINED OXIDATIVE PHOSPHORYLATION DEFICIENCY 3 (TSFM) negative

COMBINED PITUITARY HORMONE DEFICIENCY 1 (POU1F1) negative

COMBINED PITUITARY HORMONE DEFICIENCY-2 (PROP1) negative CONGENITAL ADRENAL HYPERPLASIA, 11-BETA-HYDROXYLASE DEFICIENCY

(CYP11B1) negative

CONGENITAL ADRENAL HYPERPLASIA, 17-ALPHA-HYDROXYLASE DEFICIENCY

(CYP17A1) negative CONGENITAL ADRENAL HYPERPLASIA, 21-HYDROXYLASE DEFICIENCY

(CYP21A2) negative

CONGENITAL ADRENAL INSUFFICIENCY, CYP11A1-RELATED (CYP11A1) negative CONGENITAL AMEGAKARYOCYTIC THROMBOCYTOPENIA (MPL) negative CONGENITAL CHRONIC DIARRHEA (DGAT1) negative

CONGENITAL DISORDER OF GLYCOSYLATION TYPE 1, ALG1-RELATED (ALG1) negative CONGENITAL DISORDER OF GLYCOSYLATION, TYPE 1A, PMM2-Related (PMM2) negative CONGENITAL DISORDER OF GLYCOSYLATION, TYPE 1B (MPI) negative

CONGENITAL DISORDER OF GLYCOSYLATION, TYPE 1C (ALG6) negative

CONGENITAL DYSERYTHROPOIETIC ANEMIA TYPE 2 (SEC23B) negative CONGENITAL FINNISH NEPHROSIS (NPHS1) negative CONGENITAL HYDROCEPHALUS 1 (CCDC88C) negative

CONGENITAL HYDROCEPHALDS 1 (CCDC88C) negative
CONGENITAL HYPERINSULINISM, KCNJ11-Related (KCNJ11) negative
CONGENITAL INSENSITIVITY TO PAIN WITH ANHIDROSIS ( CIPA ) (NTRK1) negative
CONGENITAL MYASTHENIC SYNDROME, CHAT-RELATED (CHAT) negative
CONGENITAL MYASTHENIC SYNDROME, CHRNE-RELATED (CHRNE) negative
CONGENITAL MYASTHENIC SYNDROME, COLQ-RELATED (COLQ) negative
CONGENITAL MYASTHENIC SYNDROME, DOK7-RELATED (DOK7) negative

CONGENITAL MYASTHENIC SYNDROME, RAPSN-RELATED (RAPSN) negative

CONGENITAL NEPHROTIC SYNDROME, PLCE1-RELATED (PLCE1) negative CONGENITAL NEUTROPENIA, G6PC3-RELATED (G6PC3) negative CONGENITAL NEUTROPENIA, HAX1-RELATED (HAX1) negative

CONGENITAL NEUTROPENIA, HAAT-KELATED (HAXT) negative CONGENITAL SECRETORY CHLORIDE DIARRHEA 1 (SLC26A3) negative CORNEAL DYSTROPHY AND PERCEPTIVE DEAFNESS (SLC4A11) negative CORTICOSTERONE METHYLOXIDASE DEFICIENCY (CYP11B2) negative

COSTEFF SYNDROME (3-METHYLGLUTACONIC ACIDURIA, TYPE 3) (OPA3) negative CRB1-RELATED RETINAL DYSTROPHIES (CRB1) negative CYSTIC FIBROSIS (CFTR) negative

CYSTINOSIS (CTNS) negative

CYTOCHROME C OXIONSE DEFICIENCY, PET100-RELATED (PET100) negative CYTOCHROME P450 OXIOREDUCTASE DEFICIENCY (POR) negative

D-BIFUNCTIONAL PROTEIN DEFICIENCY (HSD17B4) negative



Patient Name:

#### **Test Information**

Ordering Physician:



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DEAFNESS, AUTOSOMAL RECESSIVE 77 (LOXHD1) negative DIHYDROPTERIDINE REDUCTASE (DHPR) DEFICIENCY (QDPR) negative DONNAI-BARROW SYNDROME (LRP2) negative DUBIN-JOHNSON SYNDROME (ABCC2) negative DYSKERATOSIS CONGENITA SPECTRUM DISORDERS (TERT) negative DYSKERATOSIS CONGENITA, RTEL1-RELATED (RTEL1) negative DYSTROPHIC EPIDERMOLYSIS BULLOSA, COL7A1-Related (COL7A1) negative

EARLY INFANTILE EPILEPTIC ENCEPHALOPATHY, CAD-RELATED (CAD) negative EHLERS-DANLOS SYNDROME TYPE VI (PLOD1) negative EHLERS-DANLOS SYNDROME, CLASSIC-LIKE, TNXB-RELATED (TNXB) negative EHLERS-DANLOS SYNDROME, TYPE VII C (ADAMTS2) negative ELLIS-VAN CREVELD SYNDROME, EVC2-RELATED (EVC2) negative ELLIS-VAN CREVELD SYNDROME, EVC-RELATED (EVC) negative ENHANCED S-CONE SYNDROME (NR2E3) negative
EPIMERASE DEFICIENCY (GALACTOSEMIA TYPE III) (GALE) negative
EPIPHYSEAL DYSPLASIA, MULTIPLE, 7/DESBUQUOIS DYSPLASIA 1 (CANT1) negative ERCC6-RELATED DISORDERS (ERCC6) negative ERCC8-RELATED DISORDERS (ERCC8) negative ETHYLMALONIC ENCEPHALOPATHY (ETHE1) negative

FACTOR XI DEFICIENCY (F11) negative FAMILIAL DYSAUTONOMIA (IKBKAP) negative FAMILIAL HEMOPHAGOCYTIC LYMPHOHISTIOCYTOSIS, PRF1-RELATED (PRF1) negative FAMILIAL HEMOPHAGOCYTIC LYMPHOHISTIOCYTOSIS, STX11-RELATED (STX11) negative FAMILIAL HEMOPHAGOCYTIC LYMPHOHISTIOCYTOSIS, STXBP2-RELATED (STXBP2) negative FAMILIAL HEMOPHAGOCYTIC LYMPHOHISTIOCYTOSIS, UNC13D-RELATED (UNC13D) negative
FAMILIAL HYPERCHOLESTEROLEMIA, LDLRAP1-RELATED (LDLRAP1) negative
FAMILIAL HYPERCHOLESTEROLEMIA, LDLR-RELATED (LDLR) negative FAMILIAL HYPERCHOLESTEROLEMIA, LDLR-RELATED (LDLR) negative FAMILIAL HYPERINSULINISM, ABCC8-RELATED (ABCC8) negative FAMILIAL HYPERINSULINISM, ABCC8-RELATED (ACP2) negative FANCONI ANEMIA, GROUP A (FANCA) negative FANCONI ANEMIA, GROUP C (FANCC) negative FANCONI ANEMIA, GROUP D2 (FANCD2) negative FANCONI ANEMIA, GROUP B2 (FANCD3) negative FANCONI ANEMIA, GROUP E (FANCE) negative FANCONI ANEMIA, GROUP F (FANCE) negative FANCONI ANEMIA, GROUP F (FANCE) negative FANCONI ANEMIA, GROUP G (FANCG) negative FANCONI ANEMIA, GROUP I (FANCI) negative FANCONI ANEMIA, GROUP J (BRIP1) negative FANCONI ANEMIA, GROUP J (BKIP1) negative FANCONI ANEMIA, GROUP L (FANCL) negative FARBER LIPOGRANULOMATOSIS (ASAH1) negative FOVEAL HYPOPLASIA (SLC38A8) negative FRASER SYNDROME 3, GRIP1-RELATED (GRIP1) negative FRASER SYNDROME, FRAS1-RELATED (FRAS1) negative FRASER SYNDROME, FREM2-RELATED (FREM2) negative FRASER SYNDROME, FREM2-RELATED (FREM2) negative

FRASER SYNDROME, FREMZ-RELATED (FREMZ) negative FRIEDREICH ATAXIA (FXN) negative FRUCTOSE-1,6-BISPHOSPHATASE DEFICIENCY (FBP1) negative FUCOSIDOSIS, FUCA1-RELATED (FUCA1) negative FUMARASE DEFICIENCY (FH) negative

GABA-TRANSAMINASE DEFICIENCY (ABAT) negative GALACTOKINASE DEFICIENCY ( GALACTOSEMIA, TYPE II ) (GALK1) negative GALACTOSEMIA (GALT) negative
GALACTOSEMIA (GALT) negative
GALACTOSIALIDOSIS (CTSA) negative
GAUCHER DISEASE (GBA) negative
GCH1-RELATED CONDITIONS (GCH1) negative GDF5-RELATED CONDITIONS (GDF5) negative
GERODERMA OSTEODYSPLASTICA (GORAB) negative GITELMAN SYNDROME (SLC12A3) negative GLANZMANN THROMBASTHENIA (ITGB3) negative GLUTARIC ACIDEMIA, TYPE 1 (GCDH) negative GLUTARIC ACIDEMIA, TYPE 2A (ETFA) negative GLUTARIC ACIDEMIA, TYPE 2B (ETFB) negative GLUTARIC ACIDEMIA, TYPE 2C (ETFDH) negative GLUTATHIONE SYNTHETASE DEFICIENCY (GSS) negative GLYCINE ENCEPHALOPATHY, AMT-RELATED (AMT) negative GLYCINE ENCEPHALOPATHY, GLDC-RELATED (GLDC) negative GLYCOGEN STORAGE DISEASE TYPE 5 ( McArdle Disease ) (PYGM) negative GLYCOGEN STORAGE DISEASE TYPE IXB (PHKB) negative GLYCOGEN STORAGE DISEASE TYPE IXC (PHKG2) negative GLYCOGEN STORAGE DISEASE, TYPE 1a (G6PC) negative GLYCOGEN STORAGE DISEASE, TYPE 1b (SLC37A4) negative GLYCOGEN STORAGE DISEASE, TYPE 2 (POMPE DISEASE) (GAA) negative GLYCOGEN STORAGE DISEASE, TYPE 3 (AGL) negative GLYCOGEN STORAGE DISEASE, TYPE 4 (GBE1) negative GLYCOGEN STORAGE DISEASE, TYPE 7 (PFKM) negative

GRACILE SYNDROME (BCS1L) negative GUANIDINOACETATE METHYLTRANSFERASE DEFICIENCY (GAMT) negative

HARLEQUIN ICHTHYOSIS (ABCA12) negative
HEME OXYGENASE 1 DEFICIENCY (HMOX1) negative

HEMOCHROMATOSIS TYPE 2A (HFE2) negative
HEMOCHROMATOSIS, TYPE 3, TFR2-Related (TFR2) negative
HEPATOCEREBRAL MITOCHONDRIAL DNA DEPLETION SYNDROME, MPV17-RELATED (MPV17) negative HEREDITARY FRUCTOSE INTOLERANCE (ALDOB) negative
HEREDITARY HEMOCHROMATOSIS TYPE 2B (HAMP) negative
HEREDITARY SPASTIC PARAPARESIS, TYPE 49 (TECPR2) negative HEREDITARY SPASTIC PARAPLEGIA, CYP7B1-RELATED (CYP7B1) negative HERMANSKY-PUDLAK SYNDROME, AP3B1-RELATED (AP3B1) negative HERMANSKY-PUDLAK SYNDROME, BLOC1S3-RELATED (BLOC1S3) negative HERMANSKY-PUDLAK SYNDROME, BLOC1S6-RELATED (BLOC1S6) negative HERMANSKY-PUDLAK SYNDROME, HPS1-RELATED (HPS1) negative HERMANSKY-PUDLAK SYNDROME, HPS3-RELATED (HPS3) negative

HERMANSKY-PUDLAK SYNDROME, HPS4-RELATED (HPS4) negative HERMANSKY-PUDLAK SYNDROME, HPS5-RELATED (HPS5) negative HERMANSKY-PUDLAK SYNDROME, HPS6-RELATED (HPS6) negative HOLOCARBOXYLASE SYNTHETASE DEFICIENCY (HLCS) negative

HOMOCYSTINURIA AND MEGALOBLASTIC ANEMIA TYPE CBLG (MTR) negative HOMOCYSTINURIA DUE TO DEFICIENCY OF MTHFR (MTHFR) negative HOMOCYSTINURIA, CBS-RELATED (CBS) negative

HOMOCYSTINURIA, Type cblE (MTRR) negative HYDROLETHALUS SYNDROME (HYLS1) negative
HYPER-IGM IMMUNODEFICIENCY (CD40) negative
HYPERORNITHINEMIA-HYPERAMMONEMIA-HOMOCITRULLINURIA (HHH SYNDROME)

HYPERORNITHINEMIA-HYPERAMMONEMIA-HOMOCITRULLINORIA (HHH SY (SLC25A15) negative
HYPERPHOSPHATEMIC FAMILIAL TUMORAL CALCINOSIS, GALNT3-RELATED (GALNT3) negative
HYPOMYELINATING LEUKODYSTROPHY 12 (VPS11) negative

HYPOPHOSPHATASIA, ALPL-RELATED (ALPL) negative

IMERSLUND-GRÄSBECK SYNDROME 2 (AMN) negative
IMMUNODEFICIENCY-CENTROMERIC INSTABILITY-FACIAL ANOMALIES (ICF)
SYNDROME, DNMT3B-RELATED (DNMT3B) negative
IMMUNODEFICIENCY-CENTROMERIC INSTABILITY-FACIAL ANOMALIES (ICF) SYNDROME, ZBTB24-RELATED (ZBTB24) negative
INCLUSION BODY MYOPATHY 2 (GNE) negative
INFANTILE CEREBRAL AND CEREBELLAR ATROPHY (MED17) negative INFANTILE NEPHRONOPHTHISIS (INVS) negative INFANTILE NEPTRONOFTH HISTS (INVS) Hegative
INFANTILE NEUROAXONAL DYSTROPHY (PLA2G6) negative
ISOLATED ECTOPIA LENTIS (ADAMTSL4) negative
ISOLATED SULFITE OXIDASE DEFICIENCY (SUOX) negative
ISOLATED THYROID-STIMULATING HORMONE DEFICIENCY (TSHB) negative
ISOVALERIC ACIDEMIA (IVD) negative

JOHANSON-BLIZZARD SYNDROME (*UBR1*) negative JOUBERT SYNDROME 2 / MECKEL SYNDROME 2 (*TMEM216*) negative JOUBERT SYNDROME AND RELATED DISORDERS (JSRD), TMEM67-RELATED (TMEM67) negative
JOUBERT SYNDROME, AHI1-RELATED (AHI1) negative

JOUBERT SYNDROME, ARL13B-RELATED (ARL13B) negative JOUBERT SYNDROME, B9D1-RELATED (B9D1) negative JOUBERT SYNDROME, B9D2-RELATED (B9D2) negative JOUBERT SYNDROME, C2CD3-RELATED/OROFACIODIGITAL SYNDROME 14

(C2CD3) negative

JOUBERT SYNDROME, CC2D2A-RELATED/COACH SYNDROME (CC2D2A) negative
JOUBERT SYNDROME, CEP104-RELATED (CEP104) negative
JOUBERT SYNDROME, CEP120-RELATED/SHORT-RIB THORACIC DYSPLASIA 13 WITH OR

WITHOUT POLYDACTYLY (CEP120) negative
JOUBERT SYNDROME, CEP41-RELATED (CEP41) negative
JOUBERT SYNDROME, CPLANE1-RELATED / OROFACIODIGITAL SYNDROME 6

(CPLANE1) negative

JOUBERT SYNDROME, CSPP1-RELATED (CSPP1) negative
JOUBERT SYNDROME, INPP5E-RELATED (INPP5E) negative
JUNCTIONAL EPIDERMOLYSIS BULLOSA, COL17A1-RELATED (COL17A1) negative

JUNCTIONAL EPIDERMOLYSIS BULLOSA, ITGA6-RELATED (ITGA6) negative JUNCTIONAL EPIDERMOLYSIS BULLOSA, ITGB4-RELATED (ITGB4) negative JUNCTIONAL EPIDERMOLYSIS BULLOSA, LAMB3-RELATED (LAMB3) negative JUNCTIONAL EPIDERMOLYSIS BULLOSA, LAMC2-RELATED (LAMC2) negative

JUNCTIONAL EPIDERMOLYSIS BULLOSA/LARYNGOONYCHOCUTANEOUS SYNDROME, LAMA3-RELATED (LAMA3) negative

KRABBE DISEASE (GALC) negative

LAMELLAR ICHTHYOSIS, TYPE 1 (TGM1) negative



Patient Name:

**Test Information** 

Ordering Physician:



Clinic Information:

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LARON SYNDROME (GHR) negative LEBER CONGENITAL AMAUROSIS 2 (RPE65) negative

LEBER CONGENITAL AMAUROSIS TYPE AIPL1 (AIPL1) negative LEBER CONGENITAL AMAUROSIS TYPE GUCY2D (GUCY2D) negative

LEBER CONGENITAL AMAUROSIS TYPE TULP1 (TULP1) negative

LEBER CONGENITAL AMAUROSIS, IQCB1-RELATED/SENIOR-LOKEN SYNDROME 5

(IQCB1) negative LEBER CONGENITAL AMAUROSIS, TYPE CEP290 (CEP290) negative

LEBER CONGENITAL AMAUROSIS, TYPE LCA5 (LCA5) negative

LEBER CONGENITAL AMAUROSIS, TYPE RDH12 (RDH12) negative LEIGH SYNDROME, FRENCH-CANADIAN TYPE (LRPPRC) negative LETHAL CONGENITAL CONTRACTURE SYNDROME 1 (GLE1) negative

LEUKOENCEPHALOPATHY WITH VANISHING WHITE MATTER (EIF2B5) negative

LEUKOENCEPHALOPATHY WITH VANISHING WHITE MATTER, EIF2B1-RELATED (EIF2B1) negative

LEUKOENCEPHALOPATHY WITH VANISHING WHITE MATTER, EIF2B2-RELATED

(EIF2B2) negative LEUKOENCEPHALOPATHY WITH VANISHING WHITE MATTER, EIF2B3-RELATED (EIF2B3) negative

LEUKOENCEPHALOPATHY WITH VANISHING WHITE MATTER, EIF2B4-RELATED

(EIF2B4) negative LIG4 SYNDROME (LIG4) negative

LIMB-GIRDLE MUSCULAR DYSTROPHY TYPE 8 (TRIM32) negative

LIMB-GIRDLE MUSCULAR DYSTROPHY, TYPE 2A (CAPN3) negative LIMB-GIRDLE MUSCULAR DYSTROPHY, TYPE 2B (DYSF) negative

LIMB-GIRDLE MUSCULAR DYSTROPHY, TYPE 2C (SGCG) negative LIMB-GIRDLE MUSCULAR DYSTROPHY, TYPE 2D (SGCA) negative LIMB-GIRDLE MUSCULAR DYSTROPHY, TYPE 2E (SGCB) negative LIMB-GIRDLE MUSCULAR DYSTROPHY, TYPE 2E (SGCB) negative LIMB-GIRDLE MUSCULAR DYSTROPHY, TYPE 2F (SGCD) negative LIMB-GIRDLE MUSCULAR DYSTROPHY, TYPE 21 (FKRP) negative

LIMB-GIRDLE MOSCOLAR DYSTROPHY, TYPE 2I (FRRP) negative
LIPOAMIDE DEHYDROGENASE DEFICIENCY (DIHYDROLIPOAMIDE DEHYDROGENASE
DEFICIENCY) (DLD) negative
LIPOID ADRENAL HYPERPLASIA (STAR) negative
LIPOPROTEIN LIPASE DEFICIENCY (LPL) negative
LONG CHAIN 3-HYDROXYACYL-COA DEHYDROGENASE DEFICIENCY (HADHA) negative

LRAT-RELATED CONDITIONS (LRAT) negative
LUNG DISEASE, IMMUNODEFICIENCY, AND CHROMOSOME BREAKAGE SYNDROME

(LICS) (NSMCE3) negative
LYSINURIC PROTEIN INTOLERANCE (SLC7A7) negative

MALONYL-COA DECARBOXYLASE DEFICIENCY (MLYCD) negative MAPLE SYRUP URINE DISEASE, TYPE 1A (BCKDHA) negative

MAPLE SYRUP URINE DISEASE, TYPE 1B (BCKDHB) negative

MAPLE SYRUP URINE DISEASE, TYPE 2 (DBT) negative MCKUSICK-KAUFMAN SYNDROME (MKKS) negative

MCKUSICK-KAUFMAN SYNDROME (MKKS) negative
MECKEL SYNDROME 7/NEPHRONOPHTHISIS 3 (NPHP3) negative
MECKEL-GRUBER SYNDROME, TYPE 1 (MKS1) negative
MECR-RELATED NEUROLOGIC DISORDER (MECR) negative
MEDIUM CHAIN ACYL-COA DEHYDROGENASE DEFICIENCY (ACADM) negative

MEDNIK SYNDROME (AP1S1) negative

MEGALENCEPHALIC LEUKOENCEPHALOPATHY WITH SUBCORTICAL CYSTS

(MLC1) negative MEROSIN-DEFICIENT MUSCULAR DYSTROPHY (LAMA2) negative

METABOLIC ENCEPHALOPATHY AND ARRHYTHMIAS, TANGO2-RELATED

(TANGO2) negative METACHROMATIC LEUKODYSTROPHY, ARSA-RELATED (ARSA) negative

METACHROMATIC LEUKODYSTROPHY, PSAP-RELATED (PSAP) negative METHYLMALONIC ACIDEMIA AND HOMOCYSTINURIA TYPE CBLF (LMBRD1) negative METHYLMALONIC ACIDEMIA, MCEE-RELATED (MCEE) negative

METHYLMALONIC ACIDURIA AND HOMOCYSTINURIA, TYPE CBLC (MMACHC) negative

METHYLMALONIC ACIDURIA AND HOMOCYSTINURIA, TYPE CbID (MMADHC) negative METHYLMALONIC ACIDURIA, MMAA-RELATED (MMAA) negative

METHYLMALONIC ACIDURIA, MMAB-RELATED (MMAB) negative

METHYLMALONIC ACIDURIA, TYPE MUT( 0 ) (MUT) negative
MEVALONIC KINASE DEFICIENCY (MVK) negative
MICROCEPHALIC OSTEODYSPLASTIC PRIMORDIAL DWARFISM TYPE II (PCNT) negative

MICROPHTHALMIA / ANOPHTHALMIA, VSX2-RELATED (VSX2) negative

MITOCHONDRIAL COMPLEX 1 DEFICIENCY, ACAD9-RELATED (ACAD9) negative MITOCHONDRIAL COMPLEX 1 DEFICIENCY, NDUFAF5-RELATED (NDUFAF5) negative MITOCHONDRIAL COMPLEX 1 DEFICIENCY, NDUFS6-RELATED (NDUFS6) negative

MITOCHONDRIAL COMPLEX I DEFICIENCY, NUCLEAR TYPE 1 (NDUFS4) negative MITOCHONDRIAL COMPLEX I DEFICIENCY, NUCLEAR TYPE 10 (NDUFAF2) negative MITOCHONDRIAL COMPLEX I DEFICIENCY, NUCLEAR TYPE 17 (NDUFAF6) negative

MITOCHONDRIAL COMPLEX I DEFICIENCY, NUCLEAR TYPE 19 (FOXRED1) negative

MITOCHONDRIAL COMPLEX I DEFICIENCY, NUCLEAR TYPE 3 (NDUFS7) negative MITOCHONDRIAL COMPLEX I DEFICIENCY, NUCLEAR TYPE 4 (NDUFV1) negative

MITOCHONDRIAL COMPLEX IV DEFICIENCY, NUCLEAR TYPE 2, SCO2-RELATED

(SCO2) negative
MITOCHONDRIAL COMPLEX IV DEFICIENCY, NUCLEAR TYPE 6 (COX15) negative

MITOCHONDRIAL DNA DEPLETION SYNDROME 2 (TK2) negative

MITOCHONDRIAL DNA DEPLETION SYNDROME 3 (DGUOK) negative MITOCHONDRIAL MYOPATHY AND SIDEROBLASTIC ANEMIA (MLASA1) (PUS1) negative MITOCHONDRIAL TRIFUNCTIONAL PROTEIN DEFICIENCY, HADHB-RELATED

(HADHB) negative MOLYBDENUM COFACTOR DEFICIENCY TYPE B (MOCS2) negative MOLYBDENUM COFACTOR DEFICIENCY, TYPE A (MOCS1) negative

MUCOLIPIDOSIS II/III A (GNPTAB) negative MUCOLIPIDOSIS III GAMMA (GNPTG) negative MUCOLIPIDOSIS, TYPE IV (MCOLN1) negative

MUCOPOLYSACCHARIDOSIS, TYPE I (HURLER SYNDROME) (IDUA) negative

MUCOPOLYSACCHARIDOSIS, TYPE III A ( SANFILIPPO A ) (SGSH) negative MUCOPOLYSACCHARIDOSIS, TYPE III B ( SANFILIPPO B ) (NAGLU) negative MUCOPOLYSACCHARIDOSIS, TYPE III C ( SANFILIPPO C ) (HGSNAT) negative

MUCOPOLYSACCHARIDOSIS, TYPE III D ( SANFILIPPO D ) (GNS) negative MUCOPOLYSACCHARIDOSIS, TYPE IV A (MORQUIO SYNDROME) (GALNS) negative MUCOPOLYSACCHARIDOSIS, TYPE IV B/GM1 GANGLIOSIDOSIS (GLB1) negative

MUCOPOLYSACCHARIDOSIS, TYPE IX (HYAL1) negative
MUCOPOLYSACCHARIDOSIS, TYPE IX (HYAL1) negative
MUCOPOLYSACCHARIDOSIS, TYPE VI (MAROTEAUX-LAMY) (ARSB) negative
MUCOPOLYSACCHARIDOSIS, TYPE VII (GUSB) negative
MULIBREY NANISM (TRIM37) negative

MULTIPLE PTERYGIUM SYNDROME, CHRNG-RELATED/ESCOBAR SYNDROME

(CHRNG) negative
MULTIPLE SULFATASE DEFICIENCY (SUMF1) negative

MUSCLE-EYE-BRAIN DISEASE, POMGNT1-RELATED (POMGNT1) negative MUSCULAR DYSTROPHY-DYSTROGLYCANOPATHY (RXYLT1) negative MUSK-RELATED CONGENITAL MYASTHENIC SYNDROME (MUSK) negative

MYONEUROGASTROINTESTINAL ENCEPHALOPATHY (MNGIE) (TYMP) negative

MYOTONIA CONGENITA (CLCN1) negative

N
N-ACETYLGLUTAMATE SYNTHASE DEFICIENCY (NAGS) negative
NEMALINE MYOPATHY, NEB-RELATED (NEB) negative
NEPHRONOPHTHISIS 1 (NPHP1) negative
NEURONAL CEROID LIPOFUSCINOSIS, CLN5-RELATED (CLN5) negative
NEURONAL CEROID LIPOFUSCINOSIS, CLN6-RELATED (CLN6) negative
NEURONAL CEROID LIPOFUSCINOSIS, CLN8-RELATED (CLN8) negative
NEURONAL CEROID LIPOFUSCINOSIS, MFSD8-RELATED (MFSD8) negative

NEURONAL CEROID LIPOFUSCINOSIS, PPT1-RELATED (PPT1) negative NEURONAL CEROID LIPOFUSCINOSIS, TPP1-RELATED (TPP1) negative NGLY1-CONGENITAL DISORDER OF GLYCOSYLATION (NGLY1) negative

NIEMANN-PICK DISEASE, TYPE C1 / D (NPC1) negative

NIEMANN-PICK DISEASE, TYPE C2 (NPC2) negative
NIEMANN-PICK DISEASE, TYPES A / B (SMPD1) negative
NIJMEGEN BREAKAGE SYNDROME (NBN) negative

NON-SYNDROMIC HEARING LOSS, GJB2-RELATED (GJB2) negative

NON-SYNDROMIC HEARING LOSS, MY015A-RELATED (MY015A) negative NONSYNDROMIC HEARING LOSS, OTOA-RELATED (OTOA) negative

NONSYNDROMIC HEARING LOSS, OTOA-RELATED (OTOA) negative NONSYNDROMIC HEARING LOSS, OTOF-RELATED (OTOF) negative NONSYNDROMIC HEARING LOSS, PJWK-RELATED (PJWK) negative NONSYNDROMIC HEARING LOSS, SYNE4-RELATED (SYNE4) negative NONSYNDROMIC HEARING LOSS, TMC1-RELATED (TMC1) negative

NONSYNDROMIC HEARING LOSS, TMPRSS3-RELATED (TMPRSS3) negative

NONSYNDROMIC INTELLECTUAL DISABILITY (CC2D1A) negative NORMOPHOSPHATEMIC TUMORAL CALCINOSIS (SAMD9) negative

OCULOCUTANEOUS ALBINISM TYPE IV (SLC45A2) negative

OCULOCUTANEOUS ALBINISM TYPE, III (TYRP1) negative

OCULOCUTANEOUS ALBINISM, OCA2-RELATED (OCA2) negative

OCULOCUTANEOUS ALBINISM, TYPES 1A AND 1B (TYR) negative
ODONTO-ONYCHO-DERMAL DYSPLASIA / SCHOPF-SCHULZ-PASSARGE SYNDROME

(WNT10A) negative

OMENN SYNDROME, RAG2-RELATED (RAG2) negative
ORNITHINE AMINOTRANSFERASE DEFICIENCY (OAT) negative

OSTEOGENESIS IMPERFECTA TYPE VII (CRTAP) negative

OSTEOGENESIS IMPERFECTA TYPE VIII (P3H1) negative OSTEOGENESIS IMPERFECTA TYPE XI (FKBP10) negative OSTEOGENESIS IMPERFECTA TYPE XII (BMP1) negative

OSTEOPETROSIS, INFANTILE MALIGNANT, TCIRG1-RELATED (TCIRG1) negative

OSTEOPETROSIS, OSTM1-RELATED (OSTM1) negative

PANTOTHENATE KINASE-ASSOCIATED NEURODEGENERATION (PANK2) negative PAPILLON LEFÈVRE SYNDROME (CTSC) negative PARKINSON DISEASE 15 (FBXO7) negative

PENDRED SYNDROME (SLC26A4) negative
PERLMAN SYNDROME (DIS3L2) negative
PGM3-CONGENITAL DISORDER OF GLYCOSYLATION (PGM3) negative

PHENYLKETONURIA (PAH) negative

PIGN-CONGENITAL DISORDER OF GLYCOSYLATION (PIGN) negative PITUITARY HORMONE DEFICIENCY, COMBINED 3 (LHX3) negative

POLG-RELATED DISORDERS (POLG) negative



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SPASTIC TETRAPLEGIA, THIN CORPUS CALLOSUM, AND PROGRESSIVE MICROCEPHALY (SPATCCM) (SLC1A4) negative

SPG11-RELATED CONDITIONS (SPG11) negative

SPINAL MUSCULAR ATROPHY (SMN1) negative SMN1: Two copies; g.27134T>G: absent; the absence of the g.27134T>G variant decreases the chance to be a silent (2+0) carrier. SPINAL MUSCULAR ATROPHY WITH RESPIRATORY DISTRESS TYPE 1 (IGHMBP2) negative

SPINOCEREBELLAR ATAXIA, AUTOSOMAL RECESSIVE 10 (ANO10) negative SPINOCEREBELLAR ATAXIA, AUTOSOMAL RECESSIVE 12 (WWOX) negative SPONDYLOCOSTAL DYSOSTOSIS 1 (DLL3) negative

SPONDYLOTHORACIC DYSOSTOSIS, MESP2-Related (MESP2) negative

STEEL SYNDROME (COL27A1) negative STEROID-RESISTANT NEPHROTIC SYNDROME (NPHS2) negative STUVE-WIEDEMANN SYNDROME (LIFR) negative

SURF1-RELATED CONDITIONS (SURF1) negative SURFACTANT DYSFUNCTION, ABCA3-RELATED (ABCA3) negative

TAY-SACHS DISEASE (HEXA) negative
TBCE-RELATED CONDITIONS (TBCE) negative

THIAMINE-RESPONSIVE MEGALOBLASTIC ANEMIA SYNDROME (SLC19A2) negative

THYROID DYSHORMONOGENESIS 1 (SLC5A5) negative THYROID DYSHORMONOGENESIS 2A (TPO) negative THYROID DYSHORMONOGENESIS 3 (TG) negative

THYROID DYSHORMONOGENESIS 6 (DUOX2) negative
TRANSCOBALAMIN II DEFICIENCY (TCN2) negative
TRICHOHEPATOENTERIC SYNDROME, SKIC2-RELATED (SKIC2) see first page TRICHOHEPATOENTERIC SYNDROME, TTC37-RELATED (TTC37) negative

TRICHOTHIODYSTROPHY 1/XERODERMA PIGMENTOSUM, GROUP D (ERCC2) negative TRIMETHYLAMINURIA (FMO3) negative

TRIPLE A SYNDROME (AAAS) negative

TSHR-RELATED CONDITIONS (TSHR) negative

TYROSINEMIA TYPE III (HPD) negative TYROSINEMIA, TYPE 1 (FAH) negative TYROSINEMIA, TYPE 2 (TAT) negative

USHER SYNDROME, TYPE 1B (MYO7A) negative

USHER SYNDROME, TYPE 1B (MYO'A) negative
USHER SYNDROME, TYPE 1D (CDH23) negative
USHER SYNDROME, TYPE 1D (CDH23) negative
USHER SYNDROME, TYPE 1F (PCDH15) negative
USHER SYNDROME, TYPE 1J/DEAFNESS, AUTOSOMAL RECESSIVE, 48 (CIB2) negative

USHER SYNDROME, TYPE 2A (USH2A) negative USHER SYNDROME, TYPE 2C (ADGRV1) negative USHER SYNDROME, TYPE 3 (CLRN1) negative

VERY LONG-CHAIN ACYL-CoA DEHYDROGENASE DEFICIENCY (ACADVL) negative

VICI SYNDROME (EPG5) negative

VITAMIN D-DEPENDENT RICKETS, TYPE 1A (CYP27B1) negative VITAMIN D-RESISTANT RICKETS TYPE 2A (VDR) negative VLDLR-ASSOCIATED CEREBELLAR HYPOPLASIA (VLDLR) negative

WALKER-WARBURG SYNDROME, CRPPA-RELATED (CRPPA) negative WALKER-WARBURG SYNDROME, FKTN-RELATED (FKTN) negative

WALKER-WARBURG SYNDROME, LARGE1-RELATED (LARGE1) negative WALKER-WARBURG SYNDROME, POMT1-RELATED (POMT1) negative WALKER-WARBURG SYNDROME, POMT2-RELATED (POMT2) negative

WARSAW BREAKAGE SYNDROME (DDX11) negative WERNER SYNDROME (WRN) negative WILSON DISEASE (ATP7B) negative

WOLCOTT-RALLISON SYNDROME (EIF2AK3) negative

WOLMAN DISEASE (LIPA) negative WOODHOUSE-SAKATI SYNDROME (DCAF17) negative

XERODERMA PIGMENTOSUM VARIANT TYPE (POLH) negative XERODERMA PIGMENTOSUM, GROUP A (XPA) negative

XERODERMA PIGMENTOSUM, GROUP C (XPC) negative

ZELLWEGER SPECTRUM DISORDER, PEX13-RELATED (PEX13) negative ZELLWEGER SPECTRUM DISORDER, PEX16-RELATED (PEX16) negative ZELLWEGER SPECTRUM DISORDER, PEX5-RELATED (PEX5) negative ZELLWEGER SPECTRUM DISORDERS, PEX10-RELATED (PEX10) negative ZELLWEGER SPECTRUM DISORDERS, PEX12-RELATED (PEX12) negative ZELLWEGER SPECTRUM DISORDERS, PEX1-RELATED (PEX1) negative ZELLWEGER SPECTRUM DISORDERS, PEX26-RELATED (PEX26) negative ZELLWEGER SPECTRUM DISORDERS, PEX2-RELATED (PEX2) negative

POLYCYSTIC KIDNEY DISEASE, AUTOSOMAL RECESSIVE (PKHD1) negative PONTOCEREBELLAR HYPOPLASIA, EXOSC3-RELATED (EXOSC3) negativ PONTOCEREBELLAR HYPOPLASIA, RARS2-RELATED (RARS2) negative PONTOCEREBELLAR HYPOPLASIA, TSEN2-RELATED (TSEN2) negative PONTOCEREBELLAR HYPOPLASIA, TSEN54-RELATED (TSEN54) negative PONTOCEREBELLAR HYPOPLASIA, TYPE 1A (VRK1) negative PONTOCEREBELLAR HYPOPLASIA, TYPE 2D (SEPSECS) negative PONTOCEREBELLAR HYPOPLASIA, VPS53-RELATED (VPS53) negative PRIMARY CILIARY DYSKINESIA, CCDC103-RELATED (CCDC103) negative PRIMARY CILIARY DYSKINESIA, CCDC39-RELATED (CCDC39) negative PRIMARY CILIARY DYSKINESIA, DNAH11-RELATED (DNAH11) negative PRIMARY CILIARY DYSKINESIA, DNAH5-RELATED (DNAH5) negative PRIMARY CILIARY DYSKINESIA, DNAI1-RELATED (DNAI1) negative PRIMARY CILIARY DYSKINESIA, DNAI2-RELATED (DNAI2) negative PRIMARY CONGENITAL GLAUCOMA/PETERS ANOMALY (CYP1B1) negative PRIMARY HYPEROXALURIA, TYPE 1 (AGXT) negative PRIMARY HYPEROXALURIA, TYPE 2 (GRHPR) negative PRIMARY HYPEROXALURIA, TYPE 3 (HOGA1) negative PRIMARY MICROCEPHALY 1, AUTOSOMAL RECESSIVE (MCPH1) negative PROGRESSIVE EARLY-ONSET ENCEPAHLOPATHY WITH BRAIN ATROPHY AND THIN CORPUS CALLOSUM (TBCD) negative PROGRESSIVE FAMILIAL INTRAHEPATIC CHOLESTASIS, ABCB4-RELATED (ABCB4) negative

PROGRESSIVE FAMILIAL INTRAHEPATIC CHOLESTASIS, TYPE 1 (PFIC1) (AT881) negative PROGRESSIVE FAMILIAL INTRAHEPATIC CHOLESTASIS, TYPE 2 (ABCB11) negative PROGRESSIVE FAMILIAL INTRAHEPATIC CHOLESTASIS, TYPE 4 (PFIC4) (TJP2) negative

PROGRESSIVE PSEUDORHEUMATOID DYSPLASIA (CCN6) negative

PROLIDASE DEFICIENCY (PEPD) negative
PROPIONIC ACIDEMIA, PCCA-RELATED (PCCA) negative
PROPIONIC ACIDEMIA, PCCB-RELATED (PCCB) negative

PROPIONIC ACIDEMIA, PCCB-RELATED (PCCB) negative
PSEUDOXANTHOMA ELASTICUM (ABCC6) negative
PTERIN-4 ALPHA-CARBINOLAMINE DEHYDRATASE (PCD) DEFICIENCY (PCBD1) negative
PYCNODYSOSTOSIS (CT5K) negative
PYRIDOXAL 5'-PHOSPHATE-DEPENDENT EPILEPSY (PNPO) negative
PYRIDOXINE-DEPENDENT EPILEPSY (ALDH7A1) negative
PYRUVATE CARBOXYLASE DEFICIENCY (PC) negative

PYRUVATE DEHYDROGENASE DEFICIENCY, PDHB-RELATED (PDHB) negative

REFSUM DISEASE, PHYH-RELATED (PHYH) negative RENAL TUBULAR ACIDOSIS AND DEAFNESS, ATP6V1B1-RELATED (ATP6V1B1) negative RENAL TUBULAR ACIDOSIS, PROXIMAL, WITH OCULAR ABNORMALITIES AND MENTAL RETARDATION (SLC4A4) negative RETINITIS PIGMENTOSA 25 (EYS) negative RETINITIS PIGMENTOSA 26 (CERKL) negative RETINITIS PIGMENTOSA 28 (FAM161A) negative RETINITIS PIGMENTOSA 36 (PRCD) negative

RETINITIS PIGMENTOSA 59 (DHDDS) negative

RETINITIS PIGMENTOSA 62 (MAK) negative RHIZOMELIC CHONDRODYSPLASIA PUNCTATA, TYPE 1 (PEX7) negative RHIZOMELIC CHONDRODYSPLASIA PUNCTATA, TYPE 2 (GNPAT) negative

RHIZOMELIC CHONDRODYSPLASIA PUNCTATA, TYPE 3 (AGPS) negative RLBP1-RELATED RETINOPATHY (RLBP1) negative ROBERTS SYNDROME (ESCO2) negative

RYR1-RELATED CONDITIONS (RYR1) negative

SALLA DISEASE (SLC17A5) negative

SANDHOFF DISEASE (HEXB) negative SCHIMKE IMMUNOOSSEOUS DYSPLASIA (SMARCAL1) negative SCHINDLER DISEASE (NAGA) negative

SEGAWA SYNDROME, TH-RELATED (TH) negative

SENIOR-LOKEN SYNDROME 4/NEPHRONOPHTHISIS 4 (NPHP4) negative SEPIAPTERIN REDUCTASE DEFICIENCY (SPR) negative SEVERE COMBINED IMMUNODEFICIENCY (SCID), CD3D-RELATED (CD3D) negative

SEVERE COMBINED IMMUNODEFICIENCY (SCID), CD3E-RELATED (CD3E) negative SEVERE COMBINED IMMUNODEFICIENCY (SCID), FOXN1-RELATED (FOXN1) negative SEVERE COMBINED IMMUNODEFICIENCY (SCID), IKBKB-RELATED (IKBKB) negative

SEVERE COMBINED IMMUNODEFICIENCY (SCID), IL7R-RELATED (IL7R) negative SEVERE COMBINED IMMUNODEFICIENCY (SCID), JAK3-RELATED (JAK3) negative SEVERE COMBINED IMMUNODEFICIENCY (SCID), PTPRC-RELATED (PTPRC) negative

SEVERE COMBINED IMMUNODEFICIENCY (SCID), RAG1-RELATED (RAG1) negative

SEVERE COMBINED IMMUNODEFICIENCY, ADA-Related (ADA) negative
SEVERE COMBINED IMMUNODEFICIENCY, TYPE ATHABASKAN (DCLRE1C) negative
SHORT-RIB THORACIC DYSPLASIA 3 WITH OR WITHOUT POLYDACTYLY

(DYNC2H1) negative (CMC271) Inegative SHWACHMAN-DIAMOND SYNDROME, SBDS-RELATED (SBDS) negative SIALIDOSIS (NEU1) negative SJÖGREN-LARSSON SYNDROME (ALDH3A2) negative

SMITH-LEMLI-OPITZ SYNDROME (DHCR7) negative SPASTIC PARAPLEGIA, TYPE 15 (ZFYVE26) negative

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 ${\bf Z}$  ZELLWEGER SPECTRUM DISORDERS, PEX6-RELATED (PEX6)  $\,$  negative



<b>Patient</b>	Information
D	N.I.

Patient Name:





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## **Testing Methodology, Limitations, and Comments:**

## **Next-generation sequencing (NGS)**

Sequencing library prepared from genomic DNA isolated from a patient sample is enriched for targets of interest using standard hybridization capture protocols and PCR amplification (for targets specified below). NGS is then performed to achieve the standards of quality control metrics, including a minimum coverage of 99% of targeted regions at 20X sequencing depth. Sequencing data is aligned to human reference sequence, followed by deduplication, metric collection and variant calling (coding region +/- 20bp). Variants are then classified according to ACMGG/AMP standards of interpretation using publicly available databases including but not limited to ENSEMBL, HGMD Pro, ClinGen, ClinVar, 1000G, ESP and gnomAD. Variants predicted to be pathogenic or likely pathogenic for the specified diseases are reported. It should be noted that the data interpretation is based on our current understanding of the genes and variants at the time of reporting. Putative positive sequencing variants that do not meet internal quality standards or are within highly homologous regions are confirmed by Sanger sequencing or gene-specific long-range PCR as needed prior to reporting.

Copy Number Variant (CNV) analysis is limited to deletions involving two or more exons for all genes on the panel, in addition to specific known recurrent single-exon deletions. CNVs of small size may have reduced detection rate. This method does not detect gene inversions, single-exonic and sub-exonic deletions (unless otherwise specified), and duplications of all sizes (unless otherwise specified). Additionally, this method does not define the exact breakpoints of detected CNV events. Confirmation testing for copy number variation is performed by specific PCR, Multiplex Ligation-dependent Probe Amplification (MLPA), next generation sequencing, or other methodology.

This test may not detect certain variants due to local sequence characteristics, high/low genomic complexity, homologous sequence, or allele dropout (PCR-based assays). Variants within noncoding regions (promoter, 5'UTR, 3'UTR, deep intronic regions, unless otherwise specified), small deletions or insertions larger than 25bp, low-level mosaic variants, structural variants such as inversions, and/or balanced translocations may not be detected with this technology.

#### **SPECIAL NOTES**

For ABCC6, variants in exons 1-9 are not detected due to the presence of regions of high homology.

For CFTR, when the CFTR R117H variant is detected, reflex analysis of the polythymidine variations (5T, 7T and 9T) at the intron 9 branch/acceptor site of the CFTR gene will be performed.

For CYP21A2, targets were enriched using long-range PCR amplification, followed by next generation sequencing. Duplication analysis will only be performed and reported when c.955C>T (p.Q319\*) is detected. Sequencing and CNV analysis may have reduced sensitivity, if variants result from complex rearrangements, in trans with a gene deletion, or CYP21A2 gene duplication on one chromosome and deletion on the other chromosome. This analysis cannot detect sequencing variants located on the CYP21A2 duplicated copy.

For DDX11, only NM\_030653.3:c.1763 - 1G > C variant will be analyzed and reported.

For GJB2, CNV analysis of upstream deletions of GJB6-D13S1830 (309kb deletion) and GJB6-D13S1854 (232kb deletion) is included.

For HBA1/HBA2, CNV analysis is offered to detect common deletions of -alpha3.7, -alpha4.2, --MED, --SEA, --FIL, --THAI, --alpha20.5, and/or HS-40.

For OTOA, variants in exons 20 - 28 are not analyzed due to high sequence homology.

For RPGRIP1L, variants in exon 23 are not detected due to assay limitation.

For SAMD9, only p.K1495E variant will be analyzed and reported.

## Friedreich Ataxia (FXN)

The GAA repeat region of the FXN gene is assessed by trinucleotide PCR assay and capillary electrophoresis. Variances of +/-1 repeat for normal alleles and up to +/-3 repeats for premutation alleles may occur. For fully penetrant expanded alleles, the precise repeat size cannot be determined, therefore the approximate allele size is reported. Sequencing and copy number variants are analyzed by next-generation sequencing analysis.

## Friedreich Ataxia Repeat Categories

Categories	GAA Repeat Sizes
Normal	<34
Premutation	34 - 65
Full	>65



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## Spinal Muscular Atrophy (SMN1)

The total combined copy number of SMN1 and SMN2 exon 7 is quantified based on NGS read depth. The ratio of SMN1 to SMN2 is calculated based on the read depth of a single nucleotide that distinguishes these two genes in exon 7. In addition to copy number analysis, testing for the presence or absence of a single nucleotide polymorphism (g.27134T>G in intron 7 of SMN1) associated with the presence of a SMN1 duplication allele is performed using NGS.

Ethnicity	Two SMN1 copies carrier risk before g.27134T>G testing	Carrier risk after g.27134T	Carrier risk after g.27134T>G testing	
		g.27134T>G ABSENT	g.27134T>G PRESENT	
Caucasian	1 in 632	1 in 769	1 in 29	
Ashkenazi Jewish	1 in 350	1 in 580	LIKELY CARRIER	
Asian	1 in 628	1 in 702	LIKELY CARRIER	
African-American	1 in 121	1 in 396	1 in 34	
Hispanic	1 in 1061	1 in 1762	1 in 140	

#### Variant Classification

Only pathogenic or likely pathogenic variants are reported. Other variants including benign variants, likely benign variants, variants of uncertain significance, or inconclusive variants identified during this analysis may be reported in certain circumstances. Our laboratory's variant classification criteria are based on the ACMG and internal guidelines and our current understanding of the specific genes. This interpretation may change over time as more information about a gene and/or variant becomes available. Natera and its lab partner(s) may reclassify variants at certain intervals but may not release updated reports without a specific request made to Natera by the ordering provider. Natera may disclose incidental findings if deemed clinically pertinent to the test performed.

## **Negative Results**

A negative carrier screening result reduces the risk for a patient to be a carrier of a specific disease but does not completely rule out carrier status. Please visit <a href="https://www.natera.com/panel-option/h-all/">https://www.natera.com/panel-option/h-all/</a> for a table of carrier rates, detection rates, residual risks and promised variants/exons per gene. Carrier rates before and after testing vary by ethnicity and assume a negative family history for each disease screened and the absence of clinical symptoms in the patient. Any patient with a family history for a specific genetic disease will have a higher carrier risk prior to testing and, if the disease-causing mutation in their family is not included on the test, their carrier risk would remain unchanged. Genetic counseling is recommended for patients with a family history of genetic disease so that risk figures based on actual family history can be determined and discussed along with potential implications for reproduction. Horizon carrier screening has been developed to identify the reproductive risks for monogenic inherited conditions. Even when one or both members of a couple screen negative for pathogenic variants in a specific gene, the disease risk for their offspring is not zero. There is still a low risk for the condition in their offspring due to a number of different mechanisms that are not detected by Horizon including, but not limited to, pathogenic variant(s) in the tested gene or in a different gene not included on Horizon, pathogenic variant(s) in an upstream regulator, uniparental disomy, de novo mutation(s), or digenic or polygenic inheritance.

#### **Additional Comments**

These analyses generally provide highly accurate information regarding the patient's carrier status. Despite this high level of accuracy, it should be kept in mind that there are many potential sources of diagnostic error, including misidentification of samples, polymorphisms, or other rare genetic variants that interfere with analysis. Families should understand that rare diagnostic errors may occur for these reasons.







Patient Information: 7280, Donor DOB:

Sex: M
MR#: 7280
Patient#:

Accession:

Partner Information:
Not Tested

Accession: N/A Wieloch, Shannon GC: Wieloch, Shannon Fairfax Cryobank 3015 Williams Drive #110 Fairfax, VA 22031

Phone:

Physician:

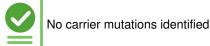
Laboratory:

Fulgent Therapeutics LLC CAP#: 8042697 CLIA#: 05D2043189 Laboratory Director: Dr. Amar Jariwala Report Date: Sep 16,2025

Specimen Type: DNA
Collected: Not Provided

## FINAL RESULTS





#### **TEST PERFORMED**

## **Single Gene Carrier Screening: IFT140**

(1 Gene Panel: *IFT140*; gene sequencing with deletion and duplication analysis)

## **INTERPRETATION:**

#### **Notes and Recommendations:**

- No carrier mutations were identified in the submitted specimen. A negative result does not rule out the possibility of a genetic predisposition nor does it rule out any pathogenic mutations in areas not assessed by this test or in regions that were covered at a level too low to reliably assess. Also, it does not rule out mutations that are of the sort not queried by this test; see Methods and Limitations for more information. A negative result reduces, but does not eliminate, the chance to be a carrier for any condition included in this screen. Please see the supplemental table for details.
- This carrier screening test does not screen for all possible genetic conditions, nor for all possible mutations in every gene
  tested. This report does not include variants of uncertain significance; only variants classified as pathogenic or likely
  pathogenic at the time of testing, and considered relevant for reproductive carrier screening, are reported. Please see the
  gene specific notes for details. Please note that the classification of variants can change over time.
- Patients may wish to discuss any carrier results with blood relatives, as there is an increased chance that they are also carriers. These results should be interpreted in the context of this individual's clinical findings, biochemical profile, and family history.
- Gene specific notes and limitations may be present. See below.
- Genetic counseling is recommended. Available genetic counselors and additional resources can be found at the National Society of Genetic Counselors (NSGC; https://www.nsgc.org)

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DOB: RM#: 7280 PAGE 1 of 4





## **GENES TESTED:**

## **Custom Beacon Carrier Screening Panel - Gene**

This analysis was run using the Custom Beacon Carrier Screening Panel gene list. 1 genes were tested with 100.0% of targets sequenced at >20x coverage. For more gene-specific information and assistance with residual risk calculation, see the SUPPLEMENTAL TABLE.

IFT140

### **METHODS:**

Genomic DNA was isolated from the submitted specimen indicated above (if cellular material was submitted). DNA was barcoded, and enriched for the coding exons of targeted genes using hybrid capture technology. Prepared DNA libraries were then sequenced using a Next Generation Sequencing technology. Following alignment to the human genome reference sequence (assembly GRCh37), variants were detected in regions of at least 10x coverage. For this specimen, 100.00% and 100.00% of coding regions and splicing junctions of genes listed had been sequenced with coverage of at least 10x and 20x, respectively, by NGS or by Sanger sequencing. The remaining regions did not have 10x coverage, and were not evaluated. Variants were interpreted manually using locus specific databases, literature searches, and other molecular biological principles. To minimize false positive results, any variants that do not meet internal quality standards are confirmed by Sanger sequencing. Variants classified as pathogenic, likely pathogenic, or risk allele which are located in the coding regions and nearby intronic regions (+/- 20bp) of the genes listed above are reported. Variants outside these intervals may be reported but are typically not guaranteed. When a single pathogenic or likely pathogenic variant is identified in a clinically relevant gene with autosomal recessive inheritance, the laboratory will attempt to ensure 100% coverage of coding sequences either through NGS or Sanger sequencing technologies ("fill-in"). All genes listed were evaluated for large deletions and/or duplications. However, single exon deletions or duplications will not be detected in this assay, nor will copy number alterations in regions of genes with significant pseudogenes. Putative deletions or duplications are analyzed using Fulgent Germline proprietary pipeline for this specimen. Bioinformatics: The FPLMv2.0 pipeline was used to analyze this specimen.

## LIMITATIONS:

## **General Limitations**

These test results and variant interpretation are based on the proper identification of the submitted specimen, accuracy of any stated familial relationships, and use of the correct human reference sequences at the queried loci. In very rare instances, errors may result due to mix-up or co-mingling of specimens. Positive results do not imply that there are no other contributors, genetic or otherwise, to future pregnancies, and negative results do not rule out the genetic risk to a pregnancy. Official gene names change over time. Fulgent uses the most up to date gene names based on HUGO Gene Nomenclature Committee (https://www.genenames.org) recommendations. If the gene name on report does not match that of ordered gene, please contact the laboratory and details can be provided. Result interpretation is based on the available clinical and family history information for this individual, collected published information, and Alamut annotation available at the time of reporting. This assay is not designed or validated for the detection of low-level mosaicism or somatic mutations. This assay will not detect certain types of genomic aberrations such as translocations, inversions, or repeat expansions other than specified genes. DNA alterations in regulatory regions or deep intronic regions (greater than 20bp from an exon) may not be detected by this test. Unless otherwise indicated, no additional assays have been performed to evaluate genetic changes in this specimen. There are technical limitations on the ability of DNA sequencing to detect small insertions and deletions. Our laboratory uses a sensitive detection algorithm, however these types of alterations are not detected as reliably as single nucleotide variants. Rarely, due to systematic chemical, computational, or human error, DNA variants may be missed. Although next generation sequencing technologies and our bioinformatics analysis significantly reduce the confounding contribution of pseudogene sequences or other highly-homologous sequences, sometimes these may still interfere with the technical ability of the assay to identify pathogenic alterations in both sequencing and deletion/duplication analyses. Deletion/duplication analysis can identify alterations of genomic regions which include one whole gene (buccal swab specimens and whole blood specimens) and are two or more contiguous exons in size (whole blood specimens only); single exon deletions or duplications may occasionally be identified, but are not routinely detected by this test. When novel DNA duplications are identified, it is not possible to discern the genomic location or orientation of the duplicated segment, hence the effect of the duplication cannot be predicted. Where deletions are detected, it is not always possible to determine whether the predicted product will remain in-frame or not. Unless otherwise indicated, deletion/duplication analysis has not been performed in regions that have been sequenced by Sanger.

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## **Gene Specific Notes and Limitations**

No gene specific limitations apply to the genes on the tested panel.

SIGNATURE:

Dr. Harry Gao, DABMG, FACMG on 09/16/2025

= Gao

Laboratory Director, Fulgent

### **DISCLAIMER:**

This test was developed, performed, and its performance characteristics determined by Fulgent Therapeutics LLC (CAP# 8042697, CLIA# 05D2043189), 4399 Santa Anita Ave., El Monte, CA 91731. It has not been cleared or approved by the FDA. The laboratory is regulated under CLIA as qualified to perform high-complexity testing. This test is used for clinical purposes. It should not be regarded as investigational or for research. Since genetic variation, as well as systematic and technical factors, can affect the accuracy of testing, the results of testing should always be interpreted in the context of clinical and familial data. For assistance with interpretation of these results, healthcare professionals may contact us directly at (626) 350-0537 or info@fulgentgenetics.com. It is recommended that patients receive appropriate genetic counseling to explain the implications of the test result, including its residual risks, uncertainties and reproductive or medical options.

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DOB: Representation of the second of the s





To view the supplemental table describing the carrier frequencies, detection rates, and residual risks associated with the genes tested on any Beacon panel, please visit the following link:

**Beacon Expanded Carrier Screening Supplemental Table** 



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