

WES LIVER DISORDERS DG 3.8.1

<i>Gene</i>	<i>Twist X2 covered >10x</i>	<i>Twist X2 covered >20x</i>	<i>WGS covered >10x</i>	<i>WGS covered >20x</i>	<i>Associated Phenotype description and OMIM disease ID</i>
ABCB11	100.0%	99.7%	100.0%	99.3%	Cholestasis, benign recurrent intrahepatic, 2, 605479;Cholestasis, progressive familial intrahepatic 2, 601847
ABCB4	100.0%	100.0%	100.0%	99.4%	Gallbladder disease 1, 600803;Cholestasis, intrahepatic, of pregnancy, 3, 614972;Cholestasis, progressive familial intrahepatic 3, 602347
ABCC2	100.0%	100.0%	100.0%	99.4%	Dubin-Johnson syndrome, 237500
ABCD3	100.0%	100.0%	100.0%	98.8%	?Bile acid synthesis defect, congenital, 5, 616278
ACOX2	100.0%	100.0%	100.0%	99.3%	Bile acid synthesis defect, congenital, 6, 617308
ACTA2	99.9%	99.1%	100.0%	99.6%	Smooth muscle dysfunction syndrome, 613834;Aortic aneurysm, familial thoracic 6, 611788;Moyamoya disease 5, 614042
ACTG2	100.0%	100.0%	100.0%	99.5%	Megacystis-microcolon-intestinal hypoperistalsis syndrome 5, 619431;Visceral myopathy 1, 155310
ADK	90.9%	90.9%	100.0%	99.5%	Hypermethioninemia due to adenosine kinase deficiency, 614300
AHCY	100.0%	100.0%	100.0%	99.9%	Hypermethioninemia with deficiency of S-adenosylhomocysteine hydrolase, 613752
AKR1D1	100.0%	100.0%	100.0%	99.5%	Bile acid synthesis defect, congenital, 2, 235555

ALDOB	100.0%	100.0%	100.0%	99.7%	Fructose intolerance, hereditary, 229600
ALG8	96.1%	96.1%	100.0%	99.1%	Congenital disorder of glycosylation, type I _h , 608104;Polycystic liver disease 3 with or without kidney cysts, 617874
ALG9	100.0%	100.0%	100.0%	99.3%	Gillessen-Kaesbach-Nishimura syndrome, 263210;Congenital disorder of glycosylation, type II, 608776
AMACR	100.0%	100.0%	100.0%	99.1%	Alpha-methylacyl-CoA racemase deficiency, 614307;Bile acid synthesis defect, congenital, 4, 214950
ANKS6	99.9%	99.4%	100.0%	99.5%	Nephronophthisis 16, 615382
AP1S1	100.0%	100.0%	100.0%	99.5%	MEDNIK syndrome, 609313
ATP7B	100.0%	100.0%	100.0%	99.7%	Wilson disease, 277900
ATP8B1	100.0%	100.0%	100.0%	98.7%	Cholestasis, progressive familial intrahepatic 1, 211600;Cholestasis, intrahepatic, of pregnancy, 1, 147480;Cholestasis, benign recurrent intrahepatic, 243300
BAAT	100.0%	100.0%	100.0%	99.4%	Bile acid conjugation defect 1, 619232
BCS1L	100.0%	100.0%	100.0%	99.9%	GRACILE syndrome, 603358;Mitochondrial complex III deficiency, nuclear type 1, 124000;Bjornstad syndrome, 262000
BLVRA	100.0%	99.9%	100.0%	99.7%	Hyperbiliverdinemia, 614156
CC2D2A	98.2%	98.2%	100.0%	99.4%	COACH syndrome 2, 619111;Retinitis pigmentosa 93, 619845;Meckel syndrome 6, 612284;Joubert syndrome 9, 612285

CEP83	100.0%	100.0%	100.0%	98.0%	Nephronophthisis 18, 615862
CFC1	100.0%	100.0%	100.0%	100.0%	Heterotaxy, visceral, 2, autosomal, 605376
CFTR	100.0%	100.0%	100.0%	99.4%	Cystic fibrosis, 219700;Congenital bilateral absence of vas deferens, 277180;{Pancreatitis, hereditary}, 167800;{Bronchiectasis with or without elevated sweat chloride 1, modifier of}, 211400;Sweat chloride elevation without CF, ;{Hypertrypsinemia, neonatal},
CHD8	100.0%	100.0%	100.0%	99.3%	Intellectual developmental disorder with autism and macrocephaly, 615032
CHRM3	100.0%	100.0%	100.0%	99.6%	Prune belly syndrome, 100100
CHRNA3	100.0%	100.0%	100.0%	99.4%	{Lung cancer susceptibility 2}, 612052;Bladder dysfunction, autonomic, with impaired pupillary reflex and secondary CAKUT, 191800
CLDN1	100.0%	100.0%	100.0%	99.8%	Ichthyosis, leukocyte vacuoles, alopecia, and sclerosing cholangitis, 607626
CLMP	100.0%	100.0%	100.0%	99.5%	Congenital short bowel syndrome, 615237
COG7	100.0%	100.0%	100.0%	99.5%	Congenital disorder of glycosylation, type IIe, 608779
CYP27A1	100.0%	100.0%	100.0%	99.8%	Cerebrotendinous xanthomatosis, 213700
CYP7B1	100.0%	100.0%	100.0%	98.5%	Spastic paraplegia 5A, autosomal recessive, 270800;Bile acid synthesis defect, congenital, 3, 613812

DCDC2	100.0%	100.0%	100.0%	98.9%	Nephronophthisis 19, 616217; ?Deafness, autosomal recessive 66, 610212; Sclerosing cholangitis, neonatal, 617394
DGUOK	100.0%	100.0%	100.0%	98.7%	Portal hypertension, noncirrhotic, 1, 617068; Progressive external ophthalmoplegia with mitochondrial DNA deletions, autosomal recessive 4, 617070; Mitochondrial DNA depletion syndrome 3 (hepatocerebral type), 251880
DHCR7	100.0%	100.0%	100.0%	99.9%	Smith-Lemli-Opitz syndrome, 270400
DKC1	100.0%	100.0%	98.0%	73.8%	?Cataracts, hearing impairment, nephrotic syndrome, and enterocolitis 1, 301108; Dyskeratosis congenita, X-linked, 305000
DNAJB11	100.0%	100.0%	100.0%	99.0%	Polycystic kidney disease 6 with or without polycystic liver disease, 618061
EDNRB	100.0%	100.0%	100.0%	99.0%	{Hirschsprung disease, susceptibility to, 2}, 600155; ?ABCD syndrome, 600501; Waardenburg syndrome, type 4A, 277580
EPHX1	100.0%	100.0%	100.0%	99.7%	
ERBB3	100.0%	100.0%	100.0%	99.6%	?Lethal congenital contractural syndrome 2, 607598; {?Erythroleukemia, familial, susceptibility to}, 133180; Visceral neuropathy, familial, 1, autosomal recessive, 243180
ETFDH	100.0%	100.0%	100.0%	99.1%	Glutaric acidemia IIC, 231680
FAH	100.0%	100.0%	100.0%	99.5%	Tyrosinemia, type I, 276700
FECH	100.0%	100.0%	100.0%	99.6%	Protoporphyrinemia, erythropoietic, 1, 177000

FH	100.0%	100.0%	100.0%	99.2%	Leiomyomatosis and renal cell cancer, 150800;Fumarase deficiency, 606812
FLNA	100.0%	99.9%	99.7%	83.8%	Otopalatodigital syndrome, type II, 304120;Intestinal pseudoobstruction, neuronal, 300048;Cardiac valvular dysplasia, X-linked, 314400;?FG syndrome 2, 300321;Melnick-Needles syndrome, 309350;Terminal osseous dysplasia, 300244;Congenital short bowel syndrome, 300048;Otopalatodigital syndrome, type I, 311300;Heterotopia, periventricular, 1, 300049;Frontometaphyseal dysplasia 1, 305620
GALT	100.0%	100.0%	100.0%	99.6%	Galactosemia, 230400
GANAB	100.0%	100.0%	100.0%	99.4%	Polycystic kidney disease 3, 600666
GBA	100.0%	100.0%	100.0%	99.6%	{Lewy body dementia, susceptibility to}, 127750;Gaucher disease, type II, 230900;Gaucher disease, type IIIC, 231005;Gaucher disease, type III, 231000;Gaucher disease, type I, 230800;Gaucher disease, perinatal lethal, 608013;{Parkinson disease, late-onset, susceptibility to}, 168600
GBE1	100.0%	99.9%	100.0%	99.4%	Glycogen storage disease IV, 232500;Polyglucosan body disease, adult form, 263570
GDNF	100.0%	100.0%	100.0%	99.6%	{Hirschsprung disease, susceptibility to, 3}, 613711
GFM1	100.0%	100.0%	100.0%	99.3%	Combined oxidative phosphorylation deficiency 1, 609060

GLI3	100.0%	100.0%	100.0%	99.8%	Greig cephalopolysyndactyly syndrome, 175700;Polydactyly, postaxial, types A1 and B, 174200;Pallister-Hall syndrome, 146510;Polydactyly, preaxial, type IV, 174700
GLIS3	100.0%	100.0%	100.0%	99.4%	Diabetes mellitus, neonatal, with congenital hypothyroidism, 610199
HADHA	100.0%	100.0%	100.0%	99.3%	HELLP syndrome, maternal, of pregnancy, 609016;LCHAD deficiency, 609016;Mitochondrial trifunctional protein deficiency 1, 609015;Fatty liver, acute, of pregnancy, 609016
HAMP	100.0%	100.0%	100.0%	97.7%	Hemochromatosis, type 2B, 613313
HFE	100.0%	100.0%	100.0%	99.6%	Hemochromatosis, type 1, 235200
HNF1B	100.0%	100.0%	100.0%	99.3%	Type 2 diabetes mellitus, 125853;Renal cysts and diabetes syndrome, 137920;{Renal cell carcinoma}, 144700
HSD17B4	96.6%	96.6%	100.0%	99.3%	D-bifunctional protein deficiency, 261515;Perrault syndrome 1, 233400
HSD3B7	100.0%	100.0%	100.0%	100.0%	Bile acid synthesis defect, congenital, 1, 607765
IARS1	100.0%	100.0%	100.0%	99.5%	Growth retardation, impaired intellectual development, hypotonia, and hepatopathy, 617093
IFT140	100.0%	100.0%	100.0%	99.6%	Short-rib thoracic dysplasia 9 with or without polydactyly, 266920;Retinitis pigmentosa 80, 617781

IFT172	100.0%	100.0%	100.0%	99.4%	Retinitis pigmentosa 71, 616394;Bardet-Biedl syndrome 20, 619471;Short-rib thoracic dysplasia 10 with or without polydactyly, 615630
IFT43	100.0%	100.0%	100.0%	99.6%	?Cranioectodermal dysplasia 3, 614099;?Retinitis pigmentosa 81, 617871;Short-rib thoracic dysplasia 18 with polydactyly, 617866
INSR	100.0%	100.0%	100.0%	99.5%	Rabson-Mendenhall syndrome, 262190;Diabetes mellitus, insulin-resistant, with acanthosis nigricans, 610549;Donohue syndrome, 246200;Hyperinsulinemic hypoglycemia, familial, 5, 609968
INVS	100.0%	100.0%	100.0%	99.5%	Nephronophthisis 2, infantile, 602088
JAG1	100.0%	100.0%	100.0%	99.6%	?Deafness, congenital heart defects, and posterior embryotoxon, 617992;Charcot-Marie-Tooth disease, axonal, type 2HH, 619574;Alagille syndrome 1, 118450;Tetralogy of Fallot, 187500
KIF12	100.0%	100.0%	100.0%	99.7%	Cholestasis, progressive familial intrahepatic, 8, 619662
LARS1	100.0%	100.0%	100.0%	99.3%	?Infantile liver failure syndrome 1, 615438
LMOD1	100.0%	100.0%	100.0%	98.7%	?Megacystis-microcolon-intestinal hypoperistalsis syndrome 3, 619362

LRP5	100.0%	100.0%	100.0%	99.6%	Osteopetrosis, autosomal dominant 1, 607634;[Bone mineral density variability 1], 601884;Polycystic liver disease 4 with or without kidney cysts, 617875;Endosteal hyperostosis, 144750;Osteoporosis-pseudoglioma syndrome, 259770;Exudative vitreoretinopathy 4, 601813
MARS1	100.0%	100.0%	100.0%	99.6%	Spastic paraplegia 70, autosomal recessive, 620323;Interstitial lung and liver disease, 615486;?Trichothiodystrophy 9, nonphotosensitive, 619692;Charcot-Marie-Tooth disease, axonal, type 2U, 616280
MPV17	100.0%	100.0%	100.0%	99.7%	Charcot-Marie-Tooth disease, axonal, type 2EE, 618400;Mitochondrial DNA depletion syndrome 6 (hepatocerebral type), 256810
MTM1	99.7%	99.2%	98.6%	72.4%	Myopathy, centronuclear, X-linked, 310400
MYH11	100.0%	100.0%	100.0%	99.2%	Megacystis-microcolon-intestinal hypoperistalsis syndrome 2, 619351;Aortic aneurysm, familial thoracic 4, 132900;Visceral myopathy 2, 619350
MYL9	100.0%	100.0%	100.0%	100.0%	?Megacystis-microcolon-intestinal hypoperistalsis syndrome 4, 619365
MYLK	100.0%	100.0%	100.0%	99.5%	Megacystis-microcolon-intestinal hypoperistalsis syndrome 1, 249210;Aortic aneurysm, familial thoracic 7, 613780
MYO5B	100.0%	99.9%	100.0%	99.5%	Diarrhea 2, with microvillus atrophy, with or without cholestasis, 251850;Cholestasis, progressive familial intrahepatic, 10, 619868

NBAS	100.0%	99.9%	100.0%	99.4%	Short stature, optic nerve atrophy, and Pelger-Huet anomaly, 614800;Infantile liver failure syndrome 2, 616483
NHP2	100.0%	100.0%	100.0%	99.6%	Dyskeratosis congenita, autosomal recessive 2, 613987
NOP10	100.0%	100.0%	100.0%	99.8%	?Pulmonary fibrosis and/or bone marrow failure syndrome, telomere-related, 9, 620400;?Cataracts, hearing impairment, nephrotic syndrome, and enterocolitis 2, 620425;?Dyskeratosis congenita, autosomal recessive 1, 224230
NOTCH2	100.0%	100.0%	100.0%	99.6%	Alagille syndrome 2, 610205;Hajdu-Cheney syndrome, 102500
NPC1	100.0%	100.0%	100.0%	99.5%	Niemann-Pick disease, type C1, 257220;Niemann-Pick disease, type D, 257220
NPC2	100.0%	100.0%	100.0%	98.9%	Niemann-pick disease, type C2, 607625
NPHP3	100.0%	100.0%	100.0%	99.4%	Nephronophthisis 3, 604387;Renal-hepatic-pancreatic dysplasia 1, 208540;Meckel syndrome 7, 267010
NR1H4	100.0%	100.0%	100.0%	99.1%	Cholestasis, progressive familial intrahepatic, 5, 617049
PEX1	100.0%	100.0%	100.0%	99.3%	Heimler syndrome 1, 234580;Peroxisome biogenesis disorder 1B (NALD/IRD), 601539;Peroxisome biogenesis disorder 1A (Zellweger), 214100
PEX10	100.0%	100.0%	100.0%	100.0%	Peroxisome biogenesis disorder 6A (Zellweger), 614870;Peroxisome biogenesis disorder 6B, 614871

PEX12	100.0%	100.0%	100.0%	99.4%	Peroxisome biogenesis disorder 3B, 266510;Peroxisome biogenesis disorder 3A (Zellweger), 614859
PEX13	100.0%	100.0%	100.0%	99.0%	Peroxisome biogenesis disorder 11A (Zellweger), 614883;Peroxisome biogenesis disorder 11B, 614885
PEX14	100.0%	100.0%	100.0%	99.8%	Peroxisome biogenesis disorder 13A (Zellweger), 614887
PEX16	100.0%	100.0%	100.0%	99.3%	Peroxisome biogenesis disorder 8B, 614877;Peroxisome biogenesis disorder 8A (Zellweger), 614876
PEX19	100.0%	100.0%	100.0%	99.6%	Peroxisome biogenesis disorder 12A (Zellweger), 614886
PEX2	100.0%	100.0%	100.0%	99.6%	Peroxisome biogenesis disorder 5A (Zellweger), 614866;Peroxisome biogenesis disorder 5B, 614867
PEX26	100.0%	100.0%	100.0%	99.2%	Peroxisome biogenesis disorder 7B, 614873;Peroxisome biogenesis disorder 7A (Zellweger), 614872
PEX3	100.0%	100.0%	100.0%	98.9%	Peroxisome biogenesis disorder 10A (Zellweger), 614882;?Peroxisome biogenesis disorder 10B, 617370
PEX5	100.0%	100.0%	100.0%	99.4%	Peroxisome biogenesis disorder 2B, 202370;Peroxisome biogenesis disorder 2A (Zellweger), 214110;Rhizomelic chondrodysplasia punctata, type 5, 616716

PEX6	100.0%	100.0%	100.0%	99.5%	Peroxisome biogenesis disorder 4B, 614863;Peroxisome biogenesis disorder 4A (Zellweger), 614862;Heimler syndrome 2, 616617
PEX7	91.2%	91.2%	100.0%	99.6%	Rhizomelic chondrodysplasia punctata, type 1, 215100;Peroxisome biogenesis disorder 9B, 614879
PKD1	99.9%	99.7%	100.0%	99.5%	Polycystic kidney disease 1, 173900
PKD2	100.0%	100.0%	100.0%	98.8%	Polycystic kidney disease 2, 613095
PKHD1	100.0%	100.0%	100.0%	99.6%	Polycystic kidney disease 4, with or without hepatic disease, 263200
POLG	100.0%	100.0%	100.0%	99.8%	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
POMC	100.0%	100.0%	100.0%	99.8%	{Obesity, early-onset, susceptibility to}, 601665;Obesity, adrenal insufficiency, and red hair due to POMC deficiency, 609734
PRKCSH	100.0%	100.0%	100.0%	99.8%	Polycystic liver disease 1, 174050
RAD21	100.0%	100.0%	100.0%	99.4%	Cornelia de Lange syndrome 4, 614701;?Mungan syndrome, 611376

RFX6	100.0%	100.0%	100.0%	99.4%	Mitchell-Riley syndrome, 615710
RINT1	100.0%	100.0%	100.0%	99.3%	Infantile liver failure syndrome 3, 618641
RPGRIP1L	100.0%	100.0%	100.0%	98.8%	Joubert syndrome 7, 611560;Meckel syndrome 5, 611561;?COACH syndrome 3, 619113
SC5D	100.0%	100.0%	100.0%	98.7%	Lathosterolosis, 607330
SCO1	100.0%	100.0%	100.0%	99.8%	Mitochondrial complex IV deficiency, nuclear type 4, 619048
SCYL1	100.0%	100.0%	100.0%	99.5%	Spinocerebellar ataxia, autosomal recessive 21, 616719
SEC61B	100.0%	100.0%	100.0%	99.2%	
SEC63	100.0%	100.0%	100.0%	99.3%	Polycystic liver disease 2, 617004
SEMA7A	100.0%	100.0%	100.0%	99.5%	?Cholestasis, progressive familial intrahepatic, 11, 619874;[Blood group, John-Milton-Hagen system], 614745
SERPINA1	100.0%	100.0%	100.0%	99.5%	Hemorrhagic diathesis due to antithrombin Pittsburgh, 613490;Emphysema due to AAT deficiency, 613490;Emphysema-cirrhosis, due to AAT deficiency, 613490
SGO1	100.0%	100.0%	100.0%	98.1%	Chronic atrial and intestinal dysrhythmia, 616201
SLC25A13	100.0%	100.0%	100.0%	99.5%	Citrullinemia, type II, neonatal-onset, 605814;Citrullinemia, adult-onset type II, 603471
SLC40A1	100.0%	100.0%	100.0%	99.7%	Hemochromatosis, type 4, 606069
SLC51A	100.0%	100.0%	100.0%	100.0%	?Cholestasis, progressive familial intrahepatic, 6, 619484

SMPD1	100.0%	100.0%	100.0%	99.4%	Niemann-Pick disease, type B, 607616;Niemann-Pick disease, type A, 257200
SOX10	100.0%	100.0%	100.0%	99.9%	Waardenburg syndrome, type 4C, 613266;PCWH syndrome, 609136;Waardenburg syndrome, type 2E, with or without neurologic involvement, 611584
STN1	100.0%	100.0%	100.0%	99.5%	Cerebroretinal microangiopathy with calcifications and cysts 2, 617341
TALDO1	100.0%	100.0%	100.0%	99.4%	Transaldolase deficiency, 606003
TERC					Pulmonary fibrosis and/or bone marrow failure syndrome, telomere-related, 2, 614743;Dyskeratosis congenita, autosomal dominant 1, 127550
TERT	100.0%	100.0%	100.0%	100.0%	Dyskeratosis congenita, autosomal dominant 2, 613989;Dyskeratosis congenita, autosomal recessive 4, 613989;Pulmonary fibrosis and/or bone marrow failure syndrome, telomere-related, 1, 614742;{Melanoma, cutaneous malignant, 9}, 615134;{Leukemia, acute myeloid}, 601626
TFR2	100.0%	100.0%	100.0%	99.4%	Hemochromatosis, type 3, 604250
TJP2	100.0%	100.0%	100.0%	99.1%	Hypercholanemia, familial 1, 607748;Cholestasis, progressive familial intrahepatic 4, 615878
TMEM67	99.5%	97.5%	100.0%	98.0%	Nephronophthisis 11, 613550;{Bardet-Biedl syndrome 14, modifier of}, 615991;Joubert syndrome 6, 610688;Meckel syndrome 3, 607361;?RHYNS syndrome, 602152;COACH syndrome 1, 216360

TRAF3IP1	100.0%	100.0%	100.0%	98.9%	Senior-Loken syndrome 9, 616629
TRMU	100.0%	100.0%	100.0%	99.4%	{Deafness, mitochondrial, modifier of}, 580000;Liver failure, transient infantile, 613070
TTC37	100.0%	100.0%	100.0%	99.3%	Trichohepatoenteric syndrome 1, 222470
TWNK	100.0%	100.0%	100.0%	99.7%	Mitochondrial DNA depletion syndrome 7 (hepatocerebral type), 271245;Progressive external ophthalmoplegia with mitochondrial DNA deletions, autosomal dominant 3, 609286;Perrault syndrome 5, 616138
TYMP	100.0%	100.0%	100.0%	100.0%	Mitochondrial DNA depletion syndrome 1 (MNGIE type), 603041
UBR1	98.0%	98.0%	100.0%	99.0%	Johanson-Blizzard syndrome, 243800
UGT1A1	100.0%	100.0%	100.0%	99.8%	Crigler-Najjar syndrome, type I, 218800;[Bilirubin, serum level of, QTL1], 601816;Hyperbilirubinemia, familial transient neonatal, 237900;Crigler-Najjar syndrome, type II, 606785;[Gilbert syndrome], 143500
USP53	100.0%	100.0%	100.0%	99.0%	Cholestasis, progressive familial intrahepatic, 7, with or without hearing loss, 619658
VIPAS39	100.0%	100.0%	100.0%	99.5%	Arthrogryposis, renal dysfunction, and cholestasis 2, 613404

VPS33B	100.0%	100.0%	100.0%	99.6%	Keratoderma-ichthyosis-deafness syndrome, autosomal recessive, 620009;Cholestasis, progressive familial intrahepatic, 12, 620010;Arthrogryposis, renal dysfunction, and cholestasis 1, 208085
ZFYVE19	100.0%	100.0%	100.0%	99.7%	Cholestasis, progressive familial intrahepatic, 9, 619849

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

TWIST X2 Covered 10x describes the percentage of a gene's coding sequence that is covered at least 10x when analyzed by WES using TWIST X2 chemistry.

TWIST X2 Covered 20x describes the percentage of a gene's coding sequence that is covered at least 20x when analyzed by WES using TWIST X2 chemistry.

srWGS GRCh38 Covered 10x describes the percentage of a gene's coding sequence that is covered at least 10x when analyzed by WGS mapped against GRCh38.

srWGS GRCh38 Covered 20x describes the percentage of a gene's coding sequence that is covered at least 20x when analyzed by WGS mapped against GRCh38.

non-protein coding genes are covered, but as coverage statistics are based on protein coding regions, statistics could not be generated.

OMIM release used for OMIM disease identifiers and descriptions : March 17th, 2023.

This list is accurate for panel version DG 3.7.0.

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