CILIOPATHIES PANEL DG-4.0.0 (184 GENES)

Gene	*Twist X2 covered >10x*	*Twist X2 covered >20x*	*WGS covered >10x*	*WGS covered >20x*	*Associated Phenotype description and OMIM disease ID*
ACVR2B	100.0%	100.0%	100.0%	98.7%	Heterotaxy, visceral, 4, autosomal, 613751
ADAMTS9	99.9%	99.6%	100.0%	98.1%	
AHI1	98.7%	98.7%	100.0%	98.2%	Joubert syndrome 3, 608629
ALMS1	100.0%	100.0%	100.0%	98.4%	Alstrom syndrome, 203800
ANKS6	99.9%	99.4%	100.0%	97.6%	Nephronophthisis 16, 615382
ARL13B	93.4%	93.3%	100.0%	97.3%	Joubert syndrome 8, 612291
ARL3	100.0%	100.0%	100.0%	99.6%	Retinitis pigmentosa 83, 618173;Joubert syndrome 35, 618161
ARL6	100.0%	100.0%	100.0%	95.9%	Retinitis pigmentosa 55, 613575;{Bardet-Biedl syndrome 1, modifier of}, 209900;Bardet-Biedl syndrome 3, 600151
ARMC9	95.4%	93.5%	100.0%	99.2%	Joubert syndrome 30, 617622
B9D1	100.0%	100.0%	100.0%	99.5%	?Meckel syndrome 9, 614209;Joubert syndrome 27, 617120

B9D2	100.0%	100.0%	100.0%	99.9%	?Meckel syndrome 10, 614175;Joubert syndrome 34, 614175
BBIP1	100.0%	100.0%	100.0%	98.9%	Bardet-Biedl syndrome 18, 615995
BBS1	100.0%	100.0%	100.0%	99.6%	Bardet-Biedl syndrome 1, 209900
BBS10	100.0%	100.0%	100.0%	98.7%	Bardet-Biedl syndrome 10, 615987
BBS12	100.0%	100.0%	100.0%	99.6%	Bardet-Biedl syndrome 12, 615989
BBS2	98.0%	98.0%	100.0%	98.8%	Retinitis pigmentosa 74, 616562;Bardet-Biedl syndrome 2, 615981
BBS4	100.0%	100.0%	100.0%	98.0%	Bardet-Biedl syndrome 4, 615982
BBS5	100.0%	100.0%	100.0%	98.9%	Bardet-Biedl syndrome 5, 615983
BBS7	100.0%	100.0%	100.0%	99.1%	Bardet-Biedl syndrome 7, 615984
BBS9	95.8%	95.8%	100.0%	97.9%	Bardet-Biedl syndrome 9, 615986
C2CD3	96.0%	96.0%	100.0%	98.8%	Orofaciodigital syndrome XIV, 615948
CBY1	100.0%	100.0%	100.0%	98.9%	

CC2D2A	98.2%	98.2%	100.0%	98.4%	COACH syndrome 2, 619111;Retinitis pigmentosa 93, 619845;Meckel syndrome 6, 612284;Joubert syndrome 9, 612285
CCDC103	100.0%	100.0%	100.0%	99.4%	Ciliary dyskinesia, primary, 17, 614679
CCDC28B	100.0%	100.0%	100.0%	98.8%	{Bardet-Biedl syndrome 1, modifier of}, 209900
CCDC39	100.0%	100.0%	100.0%	96.4%	Ciliary dyskinesia, primary, 14, 613807
CCDC40	100.0%	100.0%	100.0%	99.0%	Ciliary dyskinesia, primary, 15, 613808
CCDC65	100.0%	100.0%	100.0%	97.8%	Ciliary dyskinesia, primary, 27, 615504
CCNO	100.0%	100.0%	100.0%	98.9%	Ciliary dyskinesia, primary, 29, 615872
CENPF	100.0%	100.0%	100.0%	97.8%	Stromme syndrome, 243605
CEP104	100.0%	100.0%	100.0%	98.1%	Joubert syndrome 25, 616781;Intellectual developmental disorder, autosomal recessive 77, 619988
CEP120	100.0%	100.0%	100.0%	98.9%	Short-rib thoracic dysplasia 13 with or without polydactyly, 616300;Joubert syndrome 31, 617761
CEP164	100.0%	100.0%	100.0%	98.2%	Nephronophthisis 15, 614845

CEP290	100.0%	100.0%	100.0%	96.4%	Leber congenital amaurosis 10, 611755;Joubert syndrome 5, 610188;Senior-Loken syndrome 6, 610189;?Bardet-Biedl syndrome 14, 615991;Meckel syndrome 4, 611134
CEP41	100.0%	100.0%	100.0%	98.0%	Joubert syndrome 15, 614464
CEP55	100.0%	100.0%	100.0%	98.3%	Multinucleated neurons, anhydramnios, renal dysplasia, cerebellar hypoplasia, and hydranencephaly, 236500
CEP83	100.0%	100.0%	100.0%	95.9%	Nephronophthisis 18, 615862
CFAP251	100.0%	100.0%	100.0%	98.1%	Spermatogenic failure 33, 618152
CFAP298	100.0%	100.0%	100.0%	97.7%	Ciliary dyskinesia, primary, 26, 615500
CFAP300	100.0%	100.0%	100.0%	97.0%	Ciliary dyskinesia, primary, 38, 618063
CFAP410	100.0%	100.0%	100.0%	99.0%	Retinal dystrophy with macular staphyloma, 617547;Spondylometaphyseal dysplasia, axial, 602271
CFAP418	100.0%	100.0%	100.0%	98.5%	Retinitis pigmentosa 64, 614500;Cone-rod dystrophy 16, 614500;Bardet-Biedl syndrome 21, 617406

CFAP44	100.0%	100.0%	100.0%	97.6%	Spermatogenic failure 20, 617593
CFAP45	100.0%	100.0%	100.0%	98.7%	Heterotaxy, visceral, 11, autosomal, with male infertility, 619608
CFAP52	100.0%	100.0%	100.0%	98.7%	Heterotaxy, visceral, 10, autosomal, with male infertility, 619607
CFAP53	100.0%	100.0%	99.9%	97.2%	Heterotaxy, visceral, 6, autosomal recessive, 614779
CFAP69	100.0%	100.0%	100.0%	97.6%	Spermatogenic failure 24, 617959
CFC1	100.0%	100.0%	100.0%	99.6%	Heterotaxy, visceral, 2, autosomal, 605376
CPLANE1	100.0%	100.0%	100.0%	98.0%	Orofaciodigital syndrome VI, 277170;Joubert syndrome 17, 614615
CSPP1	96.9%	96.9%	100.0%	97.9%	Joubert syndrome 21, 615636
DCDC2	100.0%	100.0%	100.0%	97.6%	Nephronophthisis 19, 616217;?Deafness, autosomal recessive 66, 610212;Sclerosing cholangitis, neonatal, 617394
DDX59	100.0%	100.0%	100.0%	98.1%	Orofaciodigital syndrome V, 174300
DNAAF1	100.0%	100.0%	100.0%	99.1%	Ciliary dyskinesia, primary, 13, 613193

DNAAF11	100.0%	100.0%	100.0%	98.6%	Ciliary dyskinesia, primary, 19, 614935
DNAAF2	100.0%	100.0%	100.0%	96.4%	Ciliary dyskinesia, primary, 10, 612518
DNAAF3	100.0%	100.0%	99.9%	97.1%	Ciliary dyskinesia, primary, 2, 606763
DNAAF4	100.0%	100.0%	100.0%	96.1%	{Dyslexia, susceptibility to, 1}, 127700;Ciliary dyskinesia, primary, 25, 615482
DNAAF5	100.0%	99.9%	99.9%	96.3%	Ciliary dyskinesia, primary, 18, 614874
DNAAF6	100.0%	100.0%	97.7%	67.9%	Ciliary dyskinesia, primary, 36, X-linked, 300991
DNAH1	100.0%	100.0%	100.0%	99.2%	Spermatogenic failure 18, 617576;Ciliary dyskinesia, primary, 37, 617577
DNAH11	100.0%	100.0%	100.0%	98.3%	Ciliary dyskinesia, primary, 7, with or without situs inversus, 611884
DNAH17	100.0%	100.0%	100.0%	99.0%	Spermatogenic failure 39, 618643
DNAH5	99.9%	99.7%	100.0%	98.6%	Ciliary dyskinesia, primary, 3, with or without situs inversus, 608644
DNAH8	100.0%	99.7%	100.0%	97.8%	Spermatogenic failure 46, 619095
DNAH9	100.0%	100.0%	100.0%	98.8%	Ciliary dyskinesia, primary, 40, 618300

DNAI1	100.0%	100.0%	100.0%	99.2%	Ciliary dyskinesia, primary, 1, with or without situs inversus, 244400
DNAI2	100.0%	100.0%	100.0%	97.9%	Ciliary dyskinesia, primary, 9, with or without situs inversus, 612444
DNAJB13	100.0%	100.0%	100.0%	98.3%	Ciliary dyskinesia, primary, 34, 617091
DNAL1	100.0%	100.0%	100.0%	98.0%	Ciliary dyskinesia, primary, 16, 614017
DRC1	100.0%	100.0%	100.0%	98.8%	Spermatogenic failure 80, 620222;Ciliary dyskinesia, primary, 21, 615294
DYNC2H1	99.8%	99.4%	100.0%	97.9%	Short-rib thoracic dysplasia 3 with or without polydactyly, 613091
DYNC2I1	100.0%	100.0%	100.0%	98.0%	Short-rib thoracic dysplasia 8 with or without polydactyly, 615503
DYNC2I2	100.0%	100.0%	100.0%	99.5%	Short-rib thoracic dysplasia 11 with or without polydactyly, 615633
DYNC2LI1	100.0%	100.0%	100.0%	97.5%	Short-rib thoracic dysplasia 15 with polydactyly, 617088
DYNLT2B	100.0%	100.0%	100.0%	94.3%	Short-rib thoracic dysplasia 17 with or without polydactyly, 617405
EVC	100.0%	99.9%	100.0%	98.2%	Ellis-van Creveld syndrome, 225500;?Weyers acrofacial dysostosis, 193530

EVC2	100.0%	100.0%	100.0%	98.5%	Ellis-van Creveld syndrome, 225500;Weyers acrofacial dysostosis, 193530
EXOC8	100.0%	100.0%	100.0%	97.6%	?Neurodevelopmental disorder with microcephaly, seizures, and brain atrophy, 619076
EXTL3	100.0%	99.5%	100.0%	99.6%	Immunoskeletal dysplasia with neurodevelopmental abnormalities, 617425
FAM149B1	100.0%	100.0%	100.0%	99.3%	Joubert syndrome 36, 618763
FOXF1	100.0%	100.0%	100.0%	92.4%	Alveolar capillary dysplasia with misalignment of pulmonary veins, 265380
FOXJ1	100.0%	100.0%	100.0%	97.2%	Ciliary dyskinesia, primary, 43, 618699
FUZ	100.0%	100.0%	100.0%	98.6%	{Neural tube defects, susceptibility to}, 182940
GAS8	100.0%	100.0%	100.0%	99.5%	Ciliary dyskinesia, primary, 33, 616726
GDF1	100.0%	100.0%	100.0%	99.5%	Congenital heart defects, multiple types, 6, 613854;Right atrial isomerism (Ivemark), 208530
GLIS2	100.0%	100.0%	100.0%	99.6%	Nephronophthisis 7, 611498
HYDIN	100.0%	100.0%	100.0%	98.3%	Ciliary dyskinesia, primary, 5, 608647

HYLS1	100.0%	100.0%	100.0%	99.5%	Hydrolethalus syndrome, 236680
IFT122	100.0%	100.0%	100.0%	99.1%	Cranioectodermal dysplasia 1, 218330
IFT140	100.0%	100.0%	100.0%	99.1%	Short-rib thoracic dysplasia 9 with or without polydactyly, 266920;Retinitis pigmentosa 80, 617781
IFT172	100.0%	100.0%	100.0%	99.0%	Retinitis pigmentosa 71, 616394;Bardet-Biedl syndrome 20, 619471;Short-rib thoracic dysplasia 10 with or without polydactyly, 615630
IFT27	100.0%	100.0%	100.0%	99.2%	Bardet-Biedl syndrome 19, 615996
IFT43	100.0%	100.0%	100.0%	98.7%	?Cranioectodermal dysplasia 3, 614099;?Retinitis pigmentosa 81, 617871;Short-rib thoracic dysplasia 18 with polydactyly, 617866
IFT52	100.0%	100.0%	100.0%	98.2%	Short-rib thoracic dysplasia 16 with or without polydactyly, 617102
IFT56	100.0%	100.0%	100.0%	98.5%	Biliary, renal, neurologic, and skeletal syndrome, 619534

IFT74	100.0%	100.0%	100.0%	97.5%	Bardet-Biedl syndrome 22, 617119;Spermatogenic failure 58, 619585;Joubert syndrome 40, 619582
IFT80	100.0%	100.0%	100.0%	98.2%	Short-rib thoracic dysplasia 2 with or without polydactyly, 611263
IFT81	94.9%	94.9%	100.0%	98.4%	Short-rib thoracic dysplasia 19 with or without polydactyly, 617895
INPP5E	100.0%	100.0%	100.0%	97.0%	Impaired intellectual development, truncal obesity, retinal dystrophy, and micropenis syndrome, 610156;Joubert syndrome 1, 213300
INTU	100.0%	100.0%	100.0%	97.2%	?Orofaciodigital syndrome XVII, 617926;?Short-rib thoracic dysplasia 20 with polydactyly, 617925
INVS	100.0%	100.0%	100.0%	99.2%	Nephronophthisis 2, infantile, 602088
IQCB1	100.0%	100.0%	100.0%	97.9%	Senior-Loken syndrome 5, 609254
KATNIP	100.0%	100.0%	100.0%	99.2%	Joubert syndrome 26, 616784
KCTD3	100.0%	100.0%	100.0%	95.5%	
KIAA0586	95.6%	95.5%	100.0%	98.0%	Short-rib thoracic dysplasia 14 with polydactyly, 616546;Joubert syndrome 23, 616490

KIAA0753	100.0%	100.0%	100.0%	98.8%	?Orofaciodigital syndrome XV, 617127;?Joubert syndrome 38, 619476;Short-rib thoracic dysplasia 21 without polydactyly, 619479
KIF14	100.0%	100.0%	100.0%	98.4%	Microcephaly 20, primary, autosomal recessive, 617914;?Meckel syndrome 12, 616258
KIF7	100.0%	99.9%	100.0%	98.4%	Joubert syndrome 12, 200990;Acrocallosal syndrome, 200990;?Hydrolethalus syndrome 2, 614120;?Al-Gazali-Bakalinova syndrome, 607131
LBR	100.0%	100.0%	100.0%	97.9%	Pelger-Huet anomaly, 169400;?Reynolds syndrome, 613471;Rhizomelic skeletal dysplasia with or without Pelger-Huet anomaly, 618019;Greenberg skeletal dysplasia, 215140
LCA5	100.0%	100.0%	100.0%	97.8%	Leber congenital amaurosis 5, 604537
LRRC56	100.0%	100.0%	100.0%	99.3%	Ciliary dyskinesia, primary, 39, 618254
LZTFL1	100.0%	100.0%	100.0%	97.7%	Bardet-Biedl syndrome 17, 615994

MAPKBP1	100.0%	100.0%	100.0%	99.2%	Nephronophthisis 20, 617271
MCIDAS	100.0%	100.0%	100.0%	98.5%	Ciliary dyskinesia, primary, 42, 618695
MKKS	100.0%	100.0%	100.0%	99.3%	McKusick-Kaufman syndrome, 236700;Bardet-Biedl syndrome 6, 605231
MKS1	99.0%	99.0%	100.0%	98.9%	Bardet-Biedl syndrome 13, 615990;Meckel syndrome 1, 249000;Joubert syndrome 28, 617121
MMP21	100.0%	100.0%	100.0%	98.4%	Heterotaxy, visceral, 7, autosomal, 616749
MNS1	100.0%	100.0%	100.0%	97.1%	Heterotaxy, visceral, 9, autosomal, with male infertility, 618948
NCAPG2	100.0%	100.0%	100.0%	98.7%	Khan-Khan-Katsanis syndrome, 618460
NEK1	100.0%	100.0%	100.0%	98.2%	Short-rib thoracic dysplasia 6 with or without polydactyly, 263520;?Orofaciodigital syndrome II, 252100;{Amyotrophic lateral sclerosis, susceptibility to, 24}, 617892
NEK10	100.0%	99.8%	100.0%	98.5%	Ciliary dyskinesia, primary, 44, 618781

NEK8	100.0%	100.0%	100.0%	99.5%	Renal-hepatic-pancreatic dysplasia 2, 615415;Polycystic kidney disease 8, 620903;?Nephronophthisis 9, 613824
NME5	100.0%	100.0%	99.8%	97.1%	Ciliary dyskinesia, primary, 48, without situs inversus, 620032
NME8	99.9%	99.5%	100.0%	98.0%	?Ciliary dyskinesia, primary, 6, 610852
NODAL	100.0%	100.0%	100.0%	99.1%	Heterotaxy, visceral, 5, 270100
NPHP1	100.0%	100.0%	100.0%	98.8%	Joubert syndrome 4, 609583;Nephronophthisis 1, juvenile, 256100;Senior-Loken syndrome-1, 266900
NPHP3	100.0%	100.0%	100.0%	98.3%	Nephronophthisis 3, 604387;Renal-hepatic-pancreatic dysplasia 1, 208540;Meckel syndrome 7, 267010
NPHP4	100.0%	100.0%	100.0%	99.5%	Senior-Loken syndrome 4, 606996;Nephronophthisis 4, 606966
OCRL	100.0%	100.0%	97.8%	69.7%	Dent disease 2, 300555;Lowe syndrome, 309000
ODAD1	100.0%	100.0%	100.0%	98.9%	Ciliary dyskinesia, primary, 20, 615067

ODAD2	95.9%	95.6%	100.0%	98.0%	Ciliary dyskinesia, primary, 23, 615451
ODAD3	100.0%	100.0%	100.0%	99.3%	Ciliary dyskinesia, primary, 30, 616037
ODAD4	100.0%	100.0%	100.0%	98.5%	Ciliary dyskinesia, primary, 35, 617092
OFD1	100.0%	100.0%	96.1%	66.2%	Simpson-Golabi-Behmel syndrome, type 2, 300209;?Retinitis pigmentosa 23, 300424;Orofaciodigital syndrome I, 311200;Joubert syndrome 10, 300804
PDE6D	100.0%	100.0%	100.0%	97.0%	Joubert syndrome 22, 615665
PIBF1	100.0%	100.0%	100.0%	95.0%	Joubert syndrome 33, 617767
PIK3C2A	100.0%	100.0%	100.0%	98.0%	Oculoskeletodental syndrome, 618440
PKD1	99.9%	99.7%	100.0%	98.3%	Polycystic kidney disease 1, 173900
PKD1L1	100.0%	100.0%	100.0%	98.8%	Heterotaxy, visceral, 8, autosomal, 617205
PKD2	100.0%	100.0%	99.8%	93.4%	Polycystic kidney disease 2, 613095
PKHD1	100.0%	100.0%	100.0%	98.8%	Polycystic kidney disease 4, with or without hepatic disease, 263200
PMFBP1	100.0%	100.0%	100.0%	98.3%	Spermatogenic failure 31, 618112

POC1A	100.0%	100.0%	100.0%	99.6%	Short stature, onychodysplasia, facial dysmorphism, and hypotrichosis, 614813
RPGRIP1L	100.0%	100.0%	100.0%	97.4%	Joubert syndrome 7, 611560;Meckel syndrome 5, 611561;?COACH syndrome 3, 619113
RSPH1	100.0%	100.0%	100.0%	98.4%	Ciliary dyskinesia, primary, 24, 615481
RSPH3	100.0%	100.0%	100.0%	98.9%	Ciliary dyskinesia, primary, 32, 616481
RSPH4A	100.0%	100.0%	100.0%	96.7%	Ciliary dyskinesia, primary, 11, 612649
RSPH9	100.0%	100.0%	100.0%	98.7%	Ciliary dyskinesia, primary, 12, 612650
SCLT1	95.2%	95.2%	100.0%	97.2%	
SDCCAG8	100.0%	100.0%	100.0%	97.9%	Senior-Loken syndrome 7, 613615;Bardet-Biedl syndrome 16, 615993
SPAG1	100.0%	100.0%	100.0%	96.4%	Ciliary dyskinesia, primary, 28, 615505
SPATA7	100.0%	100.0%	100.0%	97.6%	Leber congenital amaurosis 3, 604232;Retinitis pigmentosa 94, variable age at onset, autosomal recessive, 604232
STK36	100.0%	100.0%	100.0%	98.8%	?Ciliary dyskinesia, primary, 46, 619436
TBC1D32	100.0%	100.0%	100.0%	98.0%	

TCTN1	97.8%	96.4%	100.0%	97.5%	Joubert syndrome 13, 614173
TCTN2	98.5%	98.5%	100.0%	99.1%	Joubert syndrome 24, 616654;?Meckel syndrome 8, 613885
TCTN3	100.0%	100.0%	100.0%	98.9%	Joubert syndrome 18, 614815;Orofaciodigital syndrome IV, 258860
TMEM107	100.0%	100.0%	100.0%	98.7%	Orofaciodigital syndrome XVI, 617563;Meckel syndrome 13, 617562;?Joubert syndrome 29, 617562
TMEM138	100.0%	96.8%	100.0%	98.7%	Joubert syndrome 16, 614465
TMEM216	100.0%	100.0%	100.0%	98.6%	Joubert syndrome 2, 608091;Meckel syndrome 2, 603194
TMEM218	100.0%	100.0%	100.0%	98.9%	Joubert syndrome 39, 619562
TMEM231	93.2%	93.2%	100.0%	99.5%	Joubert syndrome 20, 614970;Meckel syndrome 11, 615397
TMEM237	98.2%	98.2%	99.9%	97.8%	Joubert syndrome 14, 614424
TMEM260	100.0%	100.0%	100.0%	97.9%	Structural heart defects and renal anomalies syndrome, 617478

TMEM67	96.1%	96.1%	100.0%	95.5%	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
TOGARAM1	100.0%	100.0%	100.0%	97.8%	Joubert syndrome 37, 619185
TOPORS	100.0%	100.0%	100.0%	97.9%	Retinitis pigmentosa 31, 609923
TP73	100.0%	100.0%	100.0%	99.7%	Ciliary dyskinesia, primary, 47, and lissencephaly, 619466
TRAF3IP1	100.0%	100.0%	100.0%	96.4%	Senior-Loken syndrome 9, 616629
TRIM32	100.0%	100.0%	100.0%	99.9%	?Bardet-Biedl syndrome 11, 615988;Muscular dystrophy, limb-girdle, autosomal recessive 8, 254110
TTBK2	100.0%	100.0%	100.0%	98.8%	Spinocerebellar ataxia 11, 604432
TTC12	100.0%	100.0%	100.0%	99.3%	Ciliary dyskinesia, primary, 45, 618801
TTC21B	98.2%	97.6%	100.0%	98.6%	Short-rib thoracic dysplasia 4 with or without polydactyly, 613819;Nephronophthisis 12, 613820

TTC8	100.0%	99.9%	100.0%	97.9%	Bardet-Biedl syndrome 8, 615985;?Retinitis pigmentosa 51, 613464
TULP1	100.0%	100.0%	100.0%	98.3%	Leber congenital amaurosis 15, 613843;Retinitis pigmentosa 14, 600132
TXNDC15	100.0%	100.0%	100.0%	99.4%	Meckel syndrome 14, 619879
VHL	88.0%	87.9%	100.0%	99.3%	Erythrocytosis, familial, 2, 263400;von Hippel-Lindau syndrome, 193300;Renal cell carcinoma, somatic, 144700;Pheochromocytoma, 171300;Hemangioblastoma, cerebellar, somatic,
WDPCP	97.5%	97.3%	100.0%	98.7%	Bardet-Biedl syndrome 15, 615992;Congenital heart defects, hamartomas of tongue, and polysyndactyly, 217085
WDR19	100.0%	100.0%	99.9%	97.7%	Nephronophthisis 13, 614377;Cranioectodermal dysplasia 4, 614378;Senior-Loken syndrome 8, 616307;Short-rib thoracic dysplasia 5 with or without polydactyly, 614376;?Spermatogenic failure 72, 619867

WDR35	100.0%	100.0%	100.0%	98.9%	Short-rib thoracic dysplasia 7 with or without polydactyly, 614091;Cranioectodermal dysplasia 2, 613610
XPNPEP3	100.0%	100.0%	100.0%	99.2%	Nephronophthisis-like nephropathy 1, 613159
ZIC3	100.0%	100.0%	97.4%	68.8%	Congenital heart defects, nonsyndromic, 1, X-linked, 306955;Heterotaxy, visceral, 1, X-linked, 306955;VACTERL association, X-linked, 314390
ZMYND10	100.0%	100.0%	100.0%	99.8%	Ciliary dyskinesia, primary, 22, 615444
ZNF423	100.0%	100.0%	100.0%	99.2%	Nephronophthisis 14, 614844;Joubert syndrome 19, 614844

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 4.0.0