

Detection Rates, Pre-Test Carrier Risks, and Post-Test Residual Risks (Sorted by Gene)

The detection rates and risks set forth below were derived using publicly available information, including gnomAD (<https://gnomad.broadinstitute.org>) and ClinVar (<https://www.ncbi.nlm.nih.gov/clinvar>), and the rates were extrapolated using appropriate scientific methodologies. Published studies were used to derive individual carrier risks for CYP21A2, HBA1/HBA2 and SMN1. As additional clinical evidence is available, the data in these charts may be updated from time to time. These data are provided for general informational purposes only and are not intended as a substitute for professional medical judgment or medical advice.

For unknown or mixed ethnicity, consider using the ethnic background with the most conservative risk estimates.

N/A= Not Available

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
AAAS	Triple A syndrome	African American/Black	98	1 in 210	1 in 10,000	1 in 40,000
		Latino/Admixed American	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Ashkenazi Jewish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	1 in 422	1 in 42,000	1 in 170,000
		South Asian	99	1 in 437	1 in 44,000	1 in 180,000
		Other (population not assigned)	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		US general population	98	1 in 405	1 in 20,000	1 in 80,000
ABCA3	Pulmonary surfactant metabolism dysfunction	African American/Black	99	1 in 251	1 in 25,000	1 in 100,000
		Latino/Admixed American	99	1 in 299	1 in 30,000	1 in 120,000
		Ashkenazi Jewish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	1 in 485	1 in 48,000	1 in 190,000
		Non-Finnish European/White	99	1 in 104	1 in 10,000	1 in 40,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	1 in 248	1 in 25,000	1 in 100,000
		US general population	99	1 in 140	1 in 14,000	1 in 56,000
ABCA12	Autosomal recessive congenital ichthyosis (ARCI)	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	98	1 in 423	1 in 21,000	1 in 84,000
		South Asian	97	1 in 203	1 in 6,700	1 in 27,000
		Other (population not assigned)	99	1 in 325	1 in 32,000	1 in 130,000
		US general population	98	1 in 458	1 in 23,000	1 in 92,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
ABCB4	Progressive familial intrahepatic cholestasis	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Non-Finnish European/White	99	1 in 467	1 in 47,000	1 in 190,000
		South Asian	99	1 in 494	1 in 49,000	1 in 200,000
		Other (population not assigned)	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
ABCB11	Progressive familial intrahepatic cholestasis	African American/Black	99	1 in 456	1 in 46,000	1 in 180,000
		Latino/Admixed American	99	1 in 477	1 in 48,000	1 in 190,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	1 in 325	1 in 32,000	1 in 130,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	1 in 350	1 in 35,000	1 in 140,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	1 in 374	1 in 37,000	1 in 150,000
		US general population	99	1 in 383	1 in 38,000	1 in 150,000
ABCC8	Familial hyperinsulinism	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	1 in 74	1 in 7,300	1 in 29,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	1 in 224	1 in 22,000	1 in 88,000
		Non-Finnish European/White	99	1 in 297	1 in 30,000	1 in 120,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	1 in 491	1 in 49,000	1 in 200,000
		US general population	99	1 in 362	1 in 36,000	1 in 140,000
ABCD1	Adrenoleukodystrophy, X-linked	African American/Black	99	N/A	N/A	N/A
		Latino/Admixed American	99	N/A	N/A	N/A
		Ashkenazi Jewish	99	N/A	N/A	N/A
		East Asian	99	N/A	N/A	N/A
		Finnish	99	N/A	N/A	N/A
		Non-Finnish European/White	99	N/A	N/A	N/A
		South Asian	99	N/A	N/A	N/A
		Other (population not assigned)	99	N/A	N/A	N/A
		US general population	99	N/A	N/A	N/A

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
ABCD4	Methylmalonic acidemia with homocystinuria	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Ashkenazi Jewish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
ACAD9	Mitochondrial complex I deficiency	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Ashkenazi Jewish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
ACADM	Medium-chain acyl-CoA dehydrogenase (MCAD) deficiency	African American/Black	99	1 in 187	1 in 19,000	1 in 76,000
		Latino/Admixed American	99	1 in 122	1 in 12,000	1 in 48,000
		Ashkenazi Jewish	99	1 in 114	1 in 11,000	1 in 44,000
		East Asian	99	1 in 368	1 in 37,000	1 in 150,000
		Finnish	99	1 in 399	1 in 40,000	1 in 160,000
		Non-Finnish European/White	99	1 in 56	1 in 5,500	1 in 22,000
		South Asian	99	1 in 190	1 in 19,000	1 in 76,000
		Other (population not assigned)	99	1 in 67	1 in 6,600	1 in 26,000
		US general population	99	1 in 73	1 in 7,200	1 in 29,000
ACADSB	Short/branched chain acyl-CoA dehydrogenase deficiency	African American/Black	97	1 in 316	1 in 11,000	1 in 44,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	1 in 147	1 in 15,000	1 in 60,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	1 in 478	1 in 48,000	1 in 190,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	1 in 439	1 in 44,000	1 in 180,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
ACADVL	Very long-chain acyl-CoA dehydrogenase (VLCAD) deficiency	African American/Black	99	1 in 216	1 in 22,000	1 in 88,000
		Latino/Admixed American	99	1 in 403	1 in 40,000	1 in 160,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	1 in 471	1 in 47,000	1 in 190,000
		Finnish	99	1 in 261	1 in 26,000	1 in 100,000
		Non-Finnish European/White	99	1 in 122	1 in 12,000	1 in 48,000
		South Asian	99	1 in 432	1 in 43,000	1 in 170,000
		Other (population not assigned)	99	1 in 118	1 in 12,000	1 in 48,000
		US general population	99	1 in 156	1 in 15,000	1 in 60,000
ACAT1	Beta-ketothiolase deficiency	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	1 in 158	1 in 16,000	1 in 64,000
		Ashkenazi Jewish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		East Asian	98	1 in 383	1 in 19,000	1 in 76,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	1 in 431	1 in 43,000	1 in 170,000
		US general population	99	1 in 389	1 in 39,000	1 in 160,000
ACOX1	Peroxisomal acyl-CoA oxidase deficiency	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Ashkenazi Jewish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
ACSF3	Combined malonic and methylmalonic aciduria	African American/Black	99	1 in 204	1 in 20,000	1 in 80,000
		Latino/Admixed American	99	1 in 175	1 in 17,000	1 in 68,000
		Ashkenazi Jewish	99	1 in 341	1 in 34,000	1 in 140,000
		East Asian	99	1 in 302	1 in 30,000	1 in 120,000
		Finnish	99	1 in 331	1 in 33,000	1 in 130,000
		Non-Finnish European/White	99	1 in 71	1 in 7,000	1 in 28,000
		South Asian	99	1 in 297	1 in 30,000	1 in 120,000
		Other (population not assigned)	99	1 in 121	1 in 12,000	1 in 48,000
		US general population	99	1 in 94	1 in 9,300	1 in 37,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
ADA	Adenosine deaminase deficiency	African American/Black	99	1 in 321	1 in 32,000	1 in 130,000
		Latino/Admixed American	99	1 in 301	1 in 30,000	1 in 120,000
		Ashkenazi Jewish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Non-Finnish European/White	99	1 in 437	1 in 44,000	1 in 180,000
		South Asian	99	1 in 340	1 in 34,000	1 in 140,000
		Other (population not assigned)	99	1 in 390	1 in 39,000	1 in 160,000
		US general population	99	1 in 391	1 in 39,000	1 in 160,000
ADAMTS2	Ehlers Danlos syndrome, ADAMTS2-related	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	1 in 168	1 in 17,000	1 in 68,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Non-Finnish European/White	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
ADGRG1	Polymicrogyria	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
ADGRV1	Usher syndrome (hearing loss and retinitis pigmentosa)	African American/Black	98	1 in 191	1 in 9,500	1 in 38,000
		Latino/Admixed American	98	1 in 459	1 in 23,000	1 in 92,000
		Ashkenazi Jewish	99	1 in 298	1 in 30,000	1 in 120,000
		East Asian	98	1 in 305	1 in 15,000	1 in 60,000
		Finnish	98	1 in 404	1 in 20,000	1 in 80,000
		Non-Finnish European/White	98	1 in 173	1 in 8,600	1 in 34,000
		South Asian	99	1 in 252	1 in 25,000	1 in 100,000
		Other (population not assigned)	98	1 in 281	1 in 14,000	1 in 56,000
		US general population	98	1 in 205	1 in 10,000	1 in 40,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
AGA	Aspartylglucosaminuria	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Ashkenazi Jewish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	99	1 in 61	1 in 6,000	1 in 24,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Other (population not assigned)	99	1 in 264	1 in 26,000	1 in 100,000
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
AGL	Glycogen storage disease type III	African American/Black	99	1 in 215	1 in 21,000	1 in 84,000
		Latino/Admixed American	98	1 in 446	1 in 22,000	1 in 88,000
		Ashkenazi Jewish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	1 in 260	1 in 26,000	1 in 100,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		US general population	99	1 in 286	1 in 29,000	1 in 120,000
AGPAT2	Congenital generalized lipodystrophy	African American/Black	99	1 in 217	1 in 22,000	1 in 88,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		East Asian	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
AGPS	Rhizomelic chondrodysplasia punctata	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		South Asian	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
AGXT	Primary hyperoxaluria	African American/Black	99	1 in 398	1 in 40,000	1 in 160,000
		Latino/Admixed American	99	1 in 443	1 in 44,000	1 in 180,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	1 in 185	1 in 18,000	1 in 72,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	1 in 235	1 in 23,000	1 in 92,000
		South Asian	99	1 in 341	1 in 34,000	1 in 140,000
		Other (population not assigned)	99	1 in 257	1 in 26,000	1 in 100,000
		US general population	99	1 in 271	1 in 27,000	1 in 110,000
AHI1	Joubert syndrome and related disorders, including Meckel-Gruber syndrome	African American/Black	98	1 in 408	1 in 20,000	1 in 80,000
		Latino/Admixed American	99	1 in 439	1 in 44,000	1 in 180,000
		Ashkenazi Jewish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		East Asian	98	1 in 311	1 in 16,000	1 in 64,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	1 in 304	1 in 30,000	1 in 120,000
		South Asian	97	1 in 93	1 in 3,100	1 in 12,000
		Other (population not assigned)	99	1 in 240	1 in 24,000	1 in 96,000
US general population	98	1 in 316	1 in 16,000	1 in 64,000		
AICDA	Immunodeficiency with hyper IgM syndrome	African American/Black	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	1 in 289	1 in 29,000	1 in 120,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000		
AIPL1	Leber congenital amaurosis	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000		

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
AIRE	Autoimmune polyglandular syndrome type 1	African American/Black	99	1 in 426	1 in 43,000	1 in 170,000
		Latino/Admixed American	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Ashkenazi Jewish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		East Asian	99	1 in 302	1 in 30,000	1 in 120,000
		Finnish	99	1 in 93	1 in 9,200	1 in 37,000
		Non-Finnish European/White	98	1 in 207	1 in 10,000	1 in 40,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	98	1 in 181	1 in 9,000	1 in 36,000
		US general population	98	1 in 259	1 in 13,000	1 in 52,000
AK2	Severe combined immunodeficiency (SCID)	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
ALDH3A2	Sjogren-Larsson syndrome	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
ALDH7A1	Pyridoxine-dependent epilepsy	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Non-Finnish European/White	99	1 in 326	1 in 33,000	1 in 130,000
		South Asian	99	1 in 407	1 in 41,000	1 in 160,000
		Other (population not assigned)	99	1 in 375	1 in 37,000	1 in 150,000
		US general population	99	1 in 390	1 in 39,000	1 in 160,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
ALDOB	Hereditary fructose Intolerance	African American/Black	99	1 in 324	1 in 32,000	1 in 130,000
		Latino/Admixed American	99	1 in 227	1 in 23,000	1 in 92,000
		Ashkenazi Jewish	99	1 in 137	1 in 14,000	1 in 56,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	99	1 in 102	1 in 10,000	1 in 40,000
		Non-Finnish European/White	99	1 in 82	1 in 8,100	1 in 32,000
		South Asian	99	1 in 392	1 in 39,000	1 in 160,000
		Other (population not assigned)	99	1 in 112	1 in 11,000	1 in 44,000
		US general population	99	1 in 111	1 in 11,000	1 in 44,000
ALG1	Congenital disorders of glycosylation	African American/Black	99	1 in 277	1 in 28,000	1 in 110,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Non-Finnish European/White	99	1 in 407	1 in 41,000	1 in 160,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	1 in 461	1 in 46,000	1 in 180,000
ALG6	Congenital disorders of glycosylation	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	1 in 330	1 in 33,000	1 in 130,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	1 in 450	1 in 45,000	1 in 180,000
ALMS1	Alström syndrome	African American/Black	98	1 in 209	1 in 10,000	1 in 40,000
		Latino/Admixed American	98	1 in 307	1 in 15,000	1 in 60,000
		Ashkenazi Jewish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		East Asian	98	1 in 154	1 in 7,700	1 in 31,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	98	1 in 151	1 in 7,500	1 in 30,000
		South Asian	98	1 in 284	1 in 14,000	1 in 56,000
		Other (population not assigned)	98	1 in 334	1 in 17,000	1 in 68,000
		US general population	98	1 in 178	1 in 8,800	1 in 35,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
ALOX12B	Autosomal recessive congenital ichthyosis (ARCI)	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
ALOXE3	Autosomal recessive congenital ichthyosis (ARCI)	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	1 in 176	1 in 18,000	1 in 72,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	1 in 257	1 in 26,000	1 in 100,000
		US general population	99	1 in 244	1 in 24,000	1 in 96,000
ALPL	Hypophosphatasia	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	1 in 271	1 in 27,000	1 in 110,000
		Finnish	99	1 in 30	1 in 2,900	1 in 12,000
		Non-Finnish European/White	99	1 in 139	1 in 14,000	1 in 56,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	1 in 128	1 in 13,000	1 in 52,000
		US general population	99	1 in 191	1 in 19,000	1 in 76,000
AMPD2	Pontocerebellar hypoplasia	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
AMT	Glycine encephalopathy	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		ANO10	Spinocerebellar ataxia 10	African American/Black	98	< 1 in 500
Latino/Admixed American	99			< 1 in 500	< 1 in 50,000	< 1 in 200,000
Ashkenazi Jewish	98			< 1 in 500	< 1 in 25,000	< 1 in 100,000
East Asian	98			< 1 in 500	< 1 in 25,000	< 1 in 100,000
Finnish	97			< 1 in 500	< 1 in 17,000	< 1 in 68,000
Non-Finnish European/White	97			1 in 340	1 in 11,000	1 in 44,000
South Asian	98			< 1 in 500	< 1 in 25,000	< 1 in 100,000
Other (population not assigned)	98			< 1 in 500	< 1 in 25,000	< 1 in 100,000
US general population	98			1 in 457	1 in 23,000	1 in 92,000
ANTXR2	Hyaline fibromatosis syndrome	African American/Black	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		East Asian	97	1 in 330	1 in 11,000	1 in 44,000
		Finnish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Non-Finnish European/White	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
AP3B1	Hermansky-Pudlak syndrome	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
AP3D1	Hermansky-Pudlak syndrome	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		ARG1	Arginase deficiency	African American/Black	99	< 1 in 500
Latino/Admixed American	99			1 in 486	1 in 49,000	1 in 200,000
Ashkenazi Jewish	99			< 1 in 500	< 1 in 50,000	< 1 in 200,000
East Asian	99			< 1 in 500	< 1 in 50,000	< 1 in 200,000
Finnish	98			< 1 in 500	< 1 in 25,000	< 1 in 100,000
Non-Finnish European/White	99			< 1 in 500	< 1 in 50,000	< 1 in 200,000
South Asian	98			< 1 in 500	< 1 in 25,000	< 1 in 100,000
Other (population not assigned)	99			< 1 in 500	< 1 in 50,000	< 1 in 200,000
US general population	99			< 1 in 500	< 1 in 50,000	< 1 in 200,000
ARL6	Bardet-Biedl syndrome	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
ARL13B	Joubert syndrome and related disorders, including Meckel-Gruber syndrome	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
ARSA	Metachromatic leukodystrophy	African American/Black	98	1 in 315	1 in 16,000	1 in 64,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	1 in 320	1 in 32,000	1 in 130,000
		Finnish	99	1 in 236	1 in 24,000	1 in 96,000
		Non-Finnish European/White	99	1 in 135	1 in 13,000	1 in 52,000
		South Asian	99	1 in 386	1 in 39,000	1 in 160,000
		Other (population not assigned)	99	1 in 152	1 in 15,000	1 in 60,000
		US general population	99	1 in 178	1 in 18,000	1 in 72,000
ARSB	Mucopolysaccharidosis type VI	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Non-Finnish European/White	99	1 in 358	1 in 36,000	1 in 140,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
ARX	Developmental and epileptic encephalopathy	African American/Black	99	N/A	N/A	N/A
		Latino/Admixed American	99	N/A	N/A	N/A
		Ashkenazi Jewish	99	N/A	N/A	N/A
		East Asian	99	N/A	N/A	N/A
		Finnish	99	N/A	N/A	N/A
		Non-Finnish European/White	99	N/A	N/A	N/A
		South Asian	99	N/A	N/A	N/A
		Other (population not assigned)	99	N/A	N/A	N/A
		US general population	99	N/A	N/A	N/A
ASL	Argininosuccinic aciduria	African American/Black	99	1 in 452	1 in 45,000	1 in 180,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	1 in 94	1 in 9,300	1 in 37,000
		Non-Finnish European/White	99	1 in 142	1 in 14,000	1 in 56,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	1 in 116	1 in 12,000	1 in 48,000
		US general population	99	1 in 193	1 in 19,000	1 in 76,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
ASNS	Asparagine synthetase deficiency	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Ashkenazi Jewish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		ASPA	Canavan disease	African American/Black	99	< 1 in 500
Latino/Admixed American	99			< 1 in 500	< 1 in 50,000	< 1 in 200,000
Ashkenazi Jewish	99			1 in 48	1 in 4,700	1 in 19,000
East Asian	99			< 1 in 500	< 1 in 50,000	< 1 in 200,000
Finnish	99			1 in 254	1 in 25,000	1 in 100,000
Non-Finnish European/White	99			< 1 in 500	< 1 in 50,000	< 1 in 200,000
South Asian	99			< 1 in 500	< 1 in 50,000	< 1 in 200,000
Other (population not assigned)	99			1 in 314	1 in 31,000	1 in 120,000
US general population	99			< 1 in 500	< 1 in 50,000	< 1 in 200,000
ASS1	Citrullinemia	African American/Black	99	1 in 325	1 in 32,000	1 in 130,000
		Latino/Admixed American	99	1 in 292	1 in 29,000	1 in 120,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	1 in 338	1 in 34,000	1 in 140,000
		South Asian	99	1 in 218	1 in 22,000	1 in 88,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
ATM	Ataxia-telangiectasia	African American/Black	98	1 in 234	1 in 12,000	1 in 48,000
		Latino/Admixed American	99	1 in 259	1 in 26,000	1 in 100,000
		Ashkenazi Jewish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		East Asian	98	1 in 275	1 in 14,000	1 in 56,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	98	1 in 155	1 in 7,700	1 in 31,000
		South Asian	99	1 in 348	1 in 35,000	1 in 140,000
		Other (population not assigned)	98	1 in 207	1 in 10,000	1 in 40,000
		US general population	98	1 in 181	1 in 9,000	1 in 36,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
ATP6V0A2	Cutis laxa	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	97	1 in 441	1 in 15,000	1 in 60,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		ATP6V0A4	Renal tubular acidosis with deafness	African American/Black	99	< 1 in 500
Latino/Admixed American	99			1 in 281	1 in 28,000	1 in 110,000
Ashkenazi Jewish	99			1 in 360	1 in 36,000	1 in 140,000
East Asian	98			< 1 in 500	< 1 in 25,000	< 1 in 100,000
Finnish	98			< 1 in 500	< 1 in 25,000	< 1 in 100,000
Non-Finnish European/White	99			< 1 in 500	< 1 in 50,000	< 1 in 200,000
South Asian	98			< 1 in 500	< 1 in 25,000	< 1 in 100,000
Other (population not assigned)	99			1 in 458	1 in 46,000	1 in 180,000
US general population	99			< 1 in 500	< 1 in 50,000	< 1 in 200,000
ATP6V1B1	Renal tubular acidosis with deafness	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		East Asian	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000		
ATP6V1E1	Cutis laxa	African American/Black	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Latino/Admixed American	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
ATP7A	ATP7A-related copper transport disorders, includes Menkes syndrome	African American/Black	99	N/A	N/A	N/A
		Latino/Admixed American	99	N/A	N/A	N/A
		Ashkenazi Jewish	99	N/A	N/A	N/A
		East Asian	99	N/A	N/A	N/A
		Finnish	99	N/A	N/A	N/A
		Non-Finnish European/White	98	N/A	N/A	N/A
		South Asian	99	N/A	N/A	N/A
		Other (population not assigned)	99	N/A	N/A	N/A
		US general population	98	N/A	N/A	N/A
ATP7B	Wilson disease	African American/Black	99	1 in 205	1 in 20,000	1 in 80,000
		Latino/Admixed American	99	1 in 83	1 in 8,200	1 in 33,000
		Ashkenazi Jewish	99	1 in 42	1 in 4,100	1 in 16,000
		East Asian	99	1 in 44	1 in 4,300	1 in 17,000
		Finnish	99	1 in 215	1 in 21,000	1 in 84,000
		Non-Finnish European/White	99	1 in 72	1 in 7,100	1 in 28,000
		South Asian	99	1 in 114	1 in 11,000	1 in 44,000
		Other (population not assigned)	99	1 in 98	1 in 9,700	1 in 39,000
		US general population	99	1 in 79	1 in 7,800	1 in 31,000
ATP8B1	Progressive familial intrahepatic cholestasis	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
ATP13A2	Neurodegeneration with brain iron accumulation disorder	African American/Black	97	1 in 211	1 in 7,000	1 in 28,000
		Latino/Admixed American	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Ashkenazi Jewish	97	1 in 192	1 in 6,400	1 in 26,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
ATRX	Alpha-thalassemia X-linked intellectual disability syndrome	African American/Black	99	N/A	N/A	N/A
		Latino/Admixed American	97	N/A	N/A	N/A
		Ashkenazi Jewish	99	N/A	N/A	N/A
		East Asian	99	N/A	N/A	N/A
		Finnish	99	N/A	N/A	N/A
		Non-Finnish European/White	99	N/A	N/A	N/A
		South Asian	99	N/A	N/A	N/A
		Other (population not assigned)	99	N/A	N/A	N/A
		US general population	99	N/A	N/A	N/A
AVPR2	Nephrogenic diabetes insipidus	African American/Black	99	N/A	N/A	N/A
		Latino/Admixed American	99	N/A	N/A	N/A
		Ashkenazi Jewish	99	N/A	N/A	N/A
		East Asian	99	N/A	N/A	N/A
		Finnish	99	N/A	N/A	N/A
		Non-Finnish European/White	99	N/A	N/A	N/A
		South Asian	99	N/A	N/A	N/A
		Other (population not assigned)	99	N/A	N/A	N/A
		US general population	99	N/A	N/A	N/A
B9D1	Joubert syndrome and related disorders, including Meckel-Gruber syndrome	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
B9D2	Joubert syndrome and related disorders, including Meckel-Gruber syndrome	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Ashkenazi Jewish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
BBS1	Bardet-Biedl syndrome	African American/Black	99	1 in 266	1 in 27,000	1 in 110,000
		Latino/Admixed American	99	1 in 419	1 in 42,000	1 in 170,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	1 in 290	1 in 29,000	1 in 120,000
		Non-Finnish European/White	99	1 in 149	1 in 15,000	1 in 60,000
		South Asian	99	1 in 187	1 in 19,000	1 in 76,000
		Other (population not assigned)	99	1 in 274	1 in 27,000	1 in 110,000
		US general population	99	1 in 191	1 in 19,000	1 in 76,000
		BBS2	Bardet-Biedl syndrome	African American/Black	98	< 1 in 500
Latino/Admixed American	98			< 1 in 500	< 1 in 25,000	< 1 in 100,000
Ashkenazi Jewish	99			1 in 126	1 in 13,000	1 in 52,000
East Asian	99			1 in 192	1 in 19,000	1 in 76,000
Finnish	99			1 in 499	1 in 50,000	1 in 200,000
Non-Finnish European/White	99			1 in 423	1 in 42,000	1 in 170,000
South Asian	98			< 1 in 500	< 1 in 25,000	< 1 in 100,000
Other (population not assigned)	99			1 in 479	1 in 48,000	1 in 190,000
US general population	99			1 in 499	1 in 50,000	1 in 200,000
BBS4	Bardet-Biedl syndrome	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		East Asian	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Finnish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
BBS5	Bardet-Biedl syndrome	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		East Asian	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Finnish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
BBS7	Bardet-Biedl syndrome	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Ashkenazi Jewish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		BBS9	Bardet-Biedl syndrome	African American/Black	99	< 1 in 500
Latino/Admixed American	98			< 1 in 500	< 1 in 25,000	< 1 in 100,000
Ashkenazi Jewish	97			< 1 in 500	< 1 in 17,000	< 1 in 68,000
East Asian	97			< 1 in 500	< 1 in 17,000	< 1 in 68,000
Finnish	99			< 1 in 500	< 1 in 50,000	< 1 in 200,000
Non-Finnish European/White	98			< 1 in 500	< 1 in 25,000	< 1 in 100,000
South Asian	99			< 1 in 500	< 1 in 50,000	< 1 in 200,000
Other (population not assigned)	98			< 1 in 500	< 1 in 25,000	< 1 in 100,000
US general population	98			< 1 in 500	< 1 in 25,000	< 1 in 100,000
BBS10	Bardet-Biedl syndrome			African American/Black	97	1 in 410
		Latino/Admixed American	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Ashkenazi Jewish	97	1 in 305	1 in 10,000	1 in 40,000
		East Asian	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Finnish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Non-Finnish European/White	97	1 in 248	1 in 8,200	1 in 33,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	98	1 in 438	1 in 22,000	1 in 88,000
		US general population	97	1 in 329	1 in 11,000	1 in 44,000
BBS12	Bardet-Biedl syndrome	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Ashkenazi Jewish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		East Asian	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Finnish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
BCHE	Pseudocholinesterase deficiency	African American/Black	99	1 in 77	1 in 7,600	1 in 30,000
		Latino/Admixed American	99	1 in 36	1 in 3,500	1 in 14,000
		Ashkenazi Jewish	99	1 in 21	1 in 2,000	1 in 8,000
		East Asian	98	1 in 143	1 in 7,100	1 in 28,000
		Finnish	99	1 in 36	1 in 3,500	1 in 14,000
		Non-Finnish European/White	99	1 in 18	1 in 1,700	1 in 6,800
		South Asian	99	1 in 58	1 in 5,700	1 in 23,000
		Other (population not assigned)	99	1 in 21	1 in 2,000	1 in 8,000
		US general population	99	1 in 23	1 in 2,200	1 in 8,800
BCKDHA	Maple syrup urine disease	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
BCKDHB	Maple syrup urine disease	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	1 in 404	1 in 40,000	1 in 160,000
		Ashkenazi Jewish	99	1 in 74	1 in 7,300	1 in 29,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	1 in 175	1 in 17,000	1 in 68,000
		Non-Finnish European/White	99	1 in 349	1 in 35,000	1 in 140,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	98	1 in 378	1 in 19,000	1 in 76,000
		US general population	99	1 in 392	1 in 39,000	1 in 160,000
BCS1L	GRACILE syndrome	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	99	1 in 99	1 in 9,800	1 in 39,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
BLM	Bloom syndrome	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Ashkenazi Jewish	97	1 in 123	1 in 4,100	1 in 16,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	1 in 327	1 in 33,000	1 in 130,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		US general population	98	1 in 384	1 in 19,000	1 in 76,000
BLOC1S3	Hermansky-Pudlak syndrome	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	1 in 405	1 in 40,000	1 in 160,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
BLOC1S6	Hermansky-Pudlak syndrome	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
BMP1	Osteogenesis imperfecta, autosomal recessive	African American/Black	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		East Asian	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
BRIP1	Fanconi anemia	African American/Black	98	1 in 391	1 in 20,000	1 in 80,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		East Asian	98	1 in 198	1 in 9,900	1 in 40,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	98	1 in 340	1 in 17,000	1 in 68,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		US general population	98	1 in 392	1 in 20,000	1 in 80,000
BSND	Bartter syndrome	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
BTD	Biotinidase deficiency, profound and partial	African American/Black	99	1 in 53	1 in 5,200	1 in 21,000
		Latino/Admixed American	99	1 in 25	1 in 2,400	1 in 9,600
		Ashkenazi Jewish	99	1 in 16	1 in 1,500	1 in 6,000
		East Asian	99	1 in 389	1 in 39,000	1 in 160,000
		Finnish	99	1 in 10	1 in 900	1 in 3,600
		Non-Finnish European/White	99	1 in 12	1 in 1,100	1 in 4,400
		South Asian	99	1 in 13	1 in 1,200	1 in 4,800
		Other (population not assigned)	99	1 in 16	1 in 1,500	1 in 6,000
		US general population	99	1 in 16	1 in 1,500	1 in 6,000
	Biotinidase deficiency, profound	African American/Black	99	1 in 159	1 in 16,000	1 in 64,000
		Latino/Admixed American	99	1 in 259	1 in 26,000	1 in 100,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	1 in 422	1 in 42,000	1 in 170,000
		Finnish	99	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Non-Finnish European/White	99	1 in 168	1 in 17,000	1 in 68,000
		South Asian	99	1 in 191	1 in 9,500	1 in 38,000
		Other (population not assigned)	99	1 in 265	1 in 26,000	1 in 100,000
US general population	99	1 in 185	1 in 18,000	1 in 72,000		

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
BTK	Agammaglobulinemia, X-linked	African American/Black	99	N/A	N/A	N/A
		Latino/Admixed American	99	N/A	N/A	N/A
		Ashkenazi Jewish	99	N/A	N/A	N/A
		East Asian	99	N/A	N/A	N/A
		Finnish	99	N/A	N/A	N/A
		Non-Finnish European/White	99	N/A	N/A	N/A
		South Asian	99	N/A	N/A	N/A
		Other (population not assigned)	99	N/A	N/A	N/A
		US general population	99	N/A	N/A	N/A
C19ORF12	Neurodegeneration with brain iron accumulation disorder	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
CAD	Developmental and epileptic encephalopathy	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	1 in 415	1 in 41,000	1 in 160,000
		East Asian	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Finnish	99	1 in 282	1 in 28,000	1 in 110,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
CAPN3	Limb-girdle muscular dystrophy	African American/Black	99	1 in 169	1 in 17,000	1 in 68,000
		Latino/Admixed American	98	1 in 286	1 in 14,000	1 in 56,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	1 in 131	1 in 13,000	1 in 52,000
		Finnish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Non-Finnish European/White	99	1 in 167	1 in 17,000	1 in 68,000
		South Asian	99	1 in 382	1 in 38,000	1 in 150,000
		Other (population not assigned)	99	1 in 265	1 in 26,000	1 in 100,000
		US general population	99	1 in 183	1 in 18,000	1 in 72,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
CAVIN1	Congenital generalized lipodystrophy	African American/Black	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Latino/Admixed American	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		CBS	Homocystinuria	African American/Black	99	1 in 264
Latino/Admixed American	99			1 in 210	1 in 21,000	1 in 84,000
Ashkenazi Jewish	99			1 in 337	1 in 34,000	1 in 140,000
East Asian	98			< 1 in 500	< 1 in 25,000	< 1 in 100,000
Finnish	99			1 in 455	1 in 45,000	1 in 180,000
Non-Finnish European/White	99			1 in 142	1 in 14,000	1 in 56,000
South Asian	99			< 1 in 500	< 1 in 50,000	< 1 in 200,000
Other (population not assigned)	99			1 in 211	1 in 21,000	1 in 84,000
US general population	99			1 in 171	1 in 17,000	1 in 68,000
CC2D2A	Joubert syndrome and related disorders, including Meckel-Gruber syndrome	African American/Black	99	1 in 214	1 in 21,000	1 in 84,000
		Latino/Admixed American	98	1 in 328	1 in 16,000	1 in 64,000
		Ashkenazi Jewish	98	1 in 201	1 in 10,000	1 in 40,000
		East Asian	98	1 in 332	1 in 17,000	1 in 68,000
		Finnish	99	1 in 142	1 in 14,000	1 in 56,000
		Non-Finnish European/White	98	1 in 194	1 in 9,700	1 in 39,000
		South Asian	99	1 in 287	1 in 29,000	1 in 120,000
		Other (population not assigned)	99	1 in 158	1 in 16,000	1 in 64,000
CCDC8	3M syndrome	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Ashkenazi Jewish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
CCDC88C	Congenital hydrocephalus 1	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
CCN6	Progressive pseudorheumatoid dysplasia	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
CD3D	Severe combined immunodeficiency (SCID)	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Finnish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
CD3E	Severe combined immunodeficiency (SCID)	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
CD3G	Severe combined immunodeficiency (SCID)	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	97	1 in 450	1 in 15,000	1 in 60,000
		Other (population not assigned)	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
CD8A	Severe combined immunodeficiency (SCID)	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
CD40	Immunodeficiency with hyper IgM syndrome	African American/Black	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
CD40LG	Hyper IgM syndrome, X-linked	African American/Black	99	N/A	N/A	N/A
		Latino/Admixed American	99	N/A	N/A	N/A
		Ashkenazi Jewish	99	N/A	N/A	N/A
		East Asian	99	N/A	N/A	N/A
		Finnish	99	N/A	N/A	N/A
		Non-Finnish European/White	99	N/A	N/A	N/A
		South Asian	99	N/A	N/A	N/A
		Other (population not assigned)	99	N/A	N/A	N/A
		US general population	99	N/A	N/A	N/A

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
CD247	Severe combined immunodeficiency (SCID)	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
CDCA7	Immunodeficiency-centromeric instability-facial anomalies (ICF) syndrome	African American/Black	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000		
CDH23	Usher syndrome (hearing loss and retinitis pigmentosa)	African American/Black	99	1 in 280	1 in 28,000	1 in 110,000
		Latino/Admixed American	98	1 in 421	1 in 21,000	1 in 84,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	97	1 in 85	1 in 2,800	1 in 11,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	1 in 281	1 in 28,000	1 in 110,000
		South Asian	99	1 in 343	1 in 34,000	1 in 140,000
		Other (population not assigned)	98	1 in 331	1 in 17,000	1 in 68,000
US general population	98	1 in 277	1 in 14,000	1 in 56,000		
CEP104	Joubert syndrome and related disorders, including Meckel-Gruber syndrome	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Ashkenazi Jewish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	1 in 473	1 in 47,000	1 in 190,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000		

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
CEP290	Ciliopathies	African American/Black	99	1 in 132	1 in 13,000	1 in 52,000
		Latino/Admixed American	98	1 in 194	1 in 9,700	1 in 39,000
		Ashkenazi Jewish	99	1 in 440	1 in 44,000	1 in 180,000
		East Asian	99	1 in 80	1 in 7,900	1 in 32,000
		Finnish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Non-Finnish European/White	98	1 in 109	1 in 5,400	1 in 22,000
		South Asian	98	1 in 214	1 in 11,000	1 in 44,000
		Other (population not assigned)	98	1 in 169	1 in 8,400	1 in 34,000
		US general population	98	1 in 122	1 in 6,100	1 in 24,000
CERKL	Retinitis pigmentosa	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	99	1 in 48	1 in 4,700	1 in 19,000
		Non-Finnish European/White	99	1 in 361	1 in 36,000	1 in 140,000
		South Asian	99	1 in 309	1 in 31,000	1 in 120,000
		Other (population not assigned)	99	1 in 305	1 in 30,000	1 in 120,000
		US general population	99	1 in 423	1 in 42,000	1 in 170,000
CERS3	Autosomal recessive congenital ichthyosis (ARCI)	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
CFTR	Cystic fibrosis	African American/Black	98	1 in 50	1 in 2,500	1 in 10,000
		Latino/Admixed American	98	1 in 40	1 in 2,000	1 in 8,000
		Ashkenazi Jewish	99	1 in 17	1 in 1,600	1 in 6,400
		East Asian	98	1 in 163	1 in 8,100	1 in 32,000
		Finnish	98	1 in 73	1 in 3,600	1 in 14,000
		Non-Finnish European/White	98	1 in 21	1 in 1,000	1 in 4,000
		South Asian	99	1 in 60	1 in 5,900	1 in 24,000
		Other (population not assigned)	98	1 in 33	1 in 1,600	1 in 6,400
		US general population	98	1 in 27	1 in 1,300	1 in 5,200

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
CHAT	Congenital myasthenic syndrome	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
CHMP1A	Pontocerebellar hypoplasia	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
CHRNE	Congenital myasthenic syndrome	African American/Black	98	1 in 465	1 in 23,000	1 in 92,000
		Latino/Admixed American	97	1 in 420	1 in 14,000	1 in 56,000
		Ashkenazi Jewish	97	1 in 153	1 in 5,100	1 in 20,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	97	1 in 348	1 in 12,000	1 in 48,000
		Other (population not assigned)	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
CHRNG	Multiple pterygium syndrome	African American/Black	97	1 in 365	1 in 12,000	1 in 48,000
		Latino/Admixed American	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	99	1 in 466	1 in 47,000	1 in 190,000
		Non-Finnish European/White	97	1 in 338	1 in 11,000	1 in 44,000
		South Asian	98	1 in 393	1 in 20,000	1 in 80,000
		Other (population not assigned)	97	1 in 452	1 in 15,000	1 in 60,000
		US general population	97	1 in 379	1 in 13,000	1 in 52,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
CHST6	Macular corneal dystrophy	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
CIB2	Usher syndrome (hearing loss and retinitis pigmentosa)	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Ashkenazi Jewish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
CIITA	Bare lymphocyte syndrome type II	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
CLCF1	Cold-induced sweating syndrome, includes Crisponi syndrome	African American/Black	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
CLCN1	Myotonia congenita	African American/Black	99	1 in 264	1 in 26,000	1 in 100,000
		Latino/Admixed American	99	1 in 241	1 in 24,000	1 in 96,000
		Ashkenazi Jewish	99	1 in 126	1 in 13,000	1 in 52,000
		East Asian	99	1 in 248	1 in 25,000	1 in 100,000
		Finnish	99	1 in 25	1 in 2,400	1 in 9,600
		Non-Finnish European/White	99	1 in 76	1 in 7,500	1 in 30,000
		South Asian	99	1 in 411	1 in 41,000	1 in 160,000
		Other (population not assigned)	99	1 in 69	1 in 6,800	1 in 27,000
		US general population	99	1 in 101	1 in 10,000	1 in 40,000
CLCN5	Dent disease	African American/Black	99	N/A	N/A	N/A
		Latino/Admixed American	99	N/A	N/A	N/A
		Ashkenazi Jewish	97	N/A	N/A	N/A
		East Asian	97	N/A	N/A	N/A
		Finnish	99	N/A	N/A	N/A
		Non-Finnish European/White	99	N/A	N/A	N/A
		South Asian	99	N/A	N/A	N/A
		Other (population not assigned)	99	N/A	N/A	N/A
US general population	98	N/A	N/A	N/A		
CLN3	Neuronal ceroid-lipofuscinosis	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000		
CLN5	Neuronal ceroid-lipofuscinosis	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Ashkenazi Jewish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000		

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
CLN6	Neuronal ceroid-lipofuscinosis	African American/Black	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
CLN8	Neuronal ceroid-lipofuscinosis	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	1 in 431	1 in 43,000	1 in 170,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
CLP1	Pontocerebellar hypoplasia	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000		
CLRN1	Usher syndrome (hearing loss and retinitis pigmentosa)	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	1 in 87	1 in 8,600	1 in 34,000
		East Asian	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Finnish	99	1 in 71	1 in 7,000	1 in 28,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	99	1 in 312	1 in 31,000	1 in 120,000
US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000		

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
CNGA1	Retinitis pigmentosa	African American/Black	98	1 in 267	1 in 13,000	1 in 52,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	97	1 in 252	1 in 8,400	1 in 34,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	1 in 196	1 in 20,000	1 in 80,000
		South Asian	99	1 in 493	1 in 49,000	1 in 200,000
		Other (population not assigned)	99	1 in 186	1 in 19,000	1 in 76,000
		US general population	99	1 in 234	1 in 23,000	1 in 92,000
CNGB1	Retinitis pigmentosa	African American/Black	99	1 in 136	1 in 14,000	1 in 56,000
		Latino/Admixed American	99	1 in 245	1 in 24,000	1 in 96,000
		Ashkenazi Jewish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		East Asian	99	1 in 281	1 in 28,000	1 in 110,000
		Finnish	99	1 in 77	1 in 7,600	1 in 30,000
		Non-Finnish European/White	99	1 in 220	1 in 22,000	1 in 88,000
		South Asian	99	1 in 402	1 in 40,000	1 in 160,000
		Other (population not assigned)	99	1 in 195	1 in 19,000	1 in 76,000
		US general population	99	1 in 210	1 in 21,000	1 in 84,000
CNGB3	Achromatopsia	African American/Black	98	1 in 436	1 in 22,000	1 in 88,000
		Latino/Admixed American	97	1 in 423	1 in 14,000	1 in 56,000
		Ashkenazi Jewish	99	1 in 272	1 in 27,000	1 in 110,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	97	1 in 172	1 in 5,700	1 in 23,000
		Non-Finnish European/White	97	1 in 119	1 in 3,900	1 in 16,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	98	1 in 149	1 in 7,400	1 in 30,000
		US general population	97	1 in 163	1 in 5,400	1 in 22,000
CNTNAP2	Pitt-Hopkins-like syndrome 1	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
COASY	Neurodegeneration with brain iron accumulation disorder	African American/Black	99	1 in 169	1 in 17,000	1 in 68,000
		Latino/Admixed American	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Ashkenazi Jewish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Non-Finnish European/White	97	1 in 350	1 in 12,000	1 in 48,000
		South Asian	99	1 in 448	1 in 45,000	1 in 180,000
		Other (population not assigned)	97	1 in 492	1 in 16,000	1 in 64,000
		US general population	98	1 in 356	1 in 18,000	1 in 72,000
COL4A3	Alport syndrome	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
COL4A4	Alport syndrome	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	1 in 178	1 in 18,000	1 in 72,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Non-Finnish European/White	99	1 in 360	1 in 36,000	1 in 140,000
		South Asian	99	1 in 463	1 in 46,000	1 in 180,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	1 in 438	1 in 44,000	1 in 180,000
COL4A5	Alport syndrome	African American/Black	99	N/A	N/A	N/A
		Latino/Admixed American	99	N/A	N/A	N/A
		Ashkenazi Jewish	99	N/A	N/A	N/A
		East Asian	99	N/A	N/A	N/A
		Finnish	97	N/A	N/A	N/A
		Non-Finnish European/White	99	N/A	N/A	N/A
		South Asian	99	N/A	N/A	N/A
		Other (population not assigned)	99	N/A	N/A	N/A
		US general population	99	N/A	N/A	N/A

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
COL7A1	Dystrophic epidermolysis bullosa	African American/Black	99	1 in 254	1 in 25,000	1 in 100,000
		Latino/Admixed American	99	1 in 203	1 in 20,000	1 in 80,000
		Ashkenazi Jewish	98	1 in 193	1 in 9,600	1 in 38,000
		East Asian	98	1 in 356	1 in 18,000	1 in 72,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	1 in 163	1 in 16,000	1 in 64,000
		South Asian	99	1 in 256	1 in 26,000	1 in 100,000
		Other (population not assigned)	98	1 in 253	1 in 13,000	1 in 52,000
		US general population	99	1 in 184	1 in 18,000	1 in 72,000
COLQ	Congenital myasthenic syndrome	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	1 in 385	1 in 38,000	1 in 150,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
CORO1A	Severe combined immunodeficiency (SCID)	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Ashkenazi Jewish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
COX15	Leigh syndrome	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	1 in 391	1 in 39,000	1 in 160,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
CP	Neurodegeneration with brain iron accumulation disorder	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	97	1 in 314	1 in 10,000	1 in 40,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	97	1 in 460	1 in 15,000	1 in 60,000
		Finnish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
CPLANE1	Joubert syndrome and related disorders, including Meckel-Gruber syndrome	African American/Black	99	1 in 134	1 in 13,000	1 in 52,000
		Latino/Admixed American	98	1 in 286	1 in 14,000	1 in 56,000
		Ashkenazi Jewish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		East Asian	99	1 in 221	1 in 22,000	1 in 88,000
		Finnish	97	1 in 324	1 in 11,000	1 in 44,000
		Non-Finnish European/White	98	1 in 151	1 in 7,500	1 in 30,000
		South Asian	98	1 in 244	1 in 12,000	1 in 48,000
		Other (population not assigned)	98	1 in 272	1 in 14,000	1 in 56,000
		US general population	98	1 in 168	1 in 8,300	1 in 33,000
CPS1	Carbamoyl phosphate synthetase I deficiency	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Ashkenazi Jewish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
CPT1A	Carnitine palmitoyltransferase I deficiency	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	1 in 274	1 in 27,000	1 in 110,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	1 in 349	1 in 35,000	1 in 140,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
CPT2	Carnitine palmitoyltransferase II deficiency	African American/Black	99	1 in 231	1 in 23,000	1 in 92,000
		Latino/Admixed American	99	1 in 299	1 in 30,000	1 in 120,000
		Ashkenazi Jewish	99	1 in 40	1 in 3,900	1 in 16,000
		East Asian	99	1 in 301	1 in 30,000	1 in 120,000
		Finnish	99	1 in 242	1 in 24,000	1 in 96,000
		Non-Finnish European/White	99	1 in 178	1 in 18,000	1 in 72,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	1 in 169	1 in 17,000	1 in 68,000
		US general population	99	1 in 204	1 in 20,000	1 in 80,000
CRLF1	Cold-induced sweating syndrome, includes Crisponi syndrome	African American/Black	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Latino/Admixed American	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
CRTAP	Osteogenesis imperfecta, autosomal recessive	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
CTC1	Coats plus syndrome and dyskeratosis congenita, CTC1-related	African American/Black	99	1 in 453	1 in 45,000	1 in 180,000
		Latino/Admixed American	98	1 in 298	1 in 15,000	1 in 60,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	1 in 237	1 in 24,000	1 in 96,000
		Finnish	97	1 in 115	1 in 3,800	1 in 15,000
		Non-Finnish European/White	98	1 in 263	1 in 13,000	1 in 52,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	97	1 in 171	1 in 5,700	1 in 23,000
		US general population	98	1 in 281	1 in 14,000	1 in 56,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
CTNS	Cystinosis	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Other (population not assigned)	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
CTSA	Galactosialidosis	African American/Black	97	1 in 76	1 in 2,500	1 in 10,000
		Latino/Admixed American	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Ashkenazi Jewish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		US general population	97	1 in 455	1 in 15,000	1 in 60,000
CTSD	Neuronal ceroid-lipofuscinosis	African American/Black	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
CTSF	Neuronal ceroid-lipofuscinosis	African American/Black	99	1 in 416	1 in 42,000	1 in 170,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	1 in 335	1 in 33,000	1 in 130,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
CTSK	Pycnodysostosis	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		CUL7	3M syndrome	African American/Black	99	1 in 305
Latino/Admixed American	99			< 1 in 500	< 1 in 50,000	< 1 in 200,000
Ashkenazi Jewish	99			< 1 in 500	< 1 in 50,000	< 1 in 200,000
East Asian	99			< 1 in 500	< 1 in 50,000	< 1 in 200,000
Finnish	98			< 1 in 500	< 1 in 25,000	< 1 in 100,000
Non-Finnish European/White	99			< 1 in 500	< 1 in 50,000	< 1 in 200,000
South Asian	98			< 1 in 500	< 1 in 25,000	< 1 in 100,000
Other (population not assigned)	99			< 1 in 500	< 1 in 50,000	< 1 in 200,000
US general population	99			< 1 in 500	< 1 in 50,000	< 1 in 200,000
CWC27	Retinitis pigmentosa			African American/Black	98	< 1 in 500
		Latino/Admixed American	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
CYBA	Chronic granulomatous disease	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Ashkenazi Jewish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
CYBB	Chronic granulomatous disease	African American/Black	99	N/A	N/A	N/A
		Latino/Admixed American	97	N/A	N/A	N/A
		Ashkenazi Jewish	97	N/A	N/A	N/A
		East Asian	99	N/A	N/A	N/A
		Finnish	99	N/A	N/A	N/A
		Non-Finnish European/White	99	N/A	N/A	N/A
		South Asian	99	N/A	N/A	N/A
		Other (population not assigned)	99	N/A	N/A	N/A
		US general population	99	N/A	N/A	N/A
CYP1B1	Primary congenital glaucoma	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	98	1 in 247	1 in 12,000	1 in 48,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	1 in 393	1 in 39,000	1 in 160,000
		Finnish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Non-Finnish European/White	99	1 in 201	1 in 20,000	1 in 80,000
		South Asian	99	1 in 274	1 in 27,000	1 in 110,000
		Other (population not assigned)	99	1 in 128	1 in 13,000	1 in 52,000
		US general population	98	1 in 231	1 in 11,000	1 in 44,000
CYP4F22	Autosomal recessive congenital ichthyosis (ARCI)	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
CYP7B1	Hereditary spastic paraplegia	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	1 in 224	1 in 22,000	1 in 88,000
		Finnish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Non-Finnish European/White	99	1 in 318	1 in 32,000	1 in 130,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	1 in 414	1 in 41,000	1 in 160,000

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
CYP11A1	Congenital adrenal hyperplasia	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
CYP11B1	Congenital adrenal hyperplasia	African American/Black	99	1 in 408	1 in 41,000	1 in 160,000
		Latino/Admixed American	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		South Asian	99	1 in 332	1 in 33,000	1 in 130,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
CYP17A1	Congenital adrenal hyperplasia	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		East Asian	98	1 in 334	1 in 17,000	1 in 68,000
		Finnish	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
CYP21A2	Congenital adrenal hyperplasia	African American	82	1 in 79	1 in 430	1 in 1700
		Ashkenazi Jewish	90	1 in 40	1 in 390	1 in 1600
		Asian	92	1 in 62	1 in 760	1 in 3000
		Indian	87	1 in 40	1 in 300	1 in 1200
		European	88	1 in 70	1 in 580	1 in 2300
		Hispanic American	89	1 in 73	1 in 660	1 in 2600

Gene	Disorder	Ethnicity	Detection Rate (%)	Individual Carrier Risk	Individual Residual Risk After Negative Result	Risk of Affected Fetus When One Partner has a Carrier Result and One Partner has a Negative Result
CYP27A1	Cerebrotendinous xanthomatosis	African American/Black	99	1 in 309	1 in 31,000	1 in 120,000
		Latino/Admixed American	99	1 in 316	1 in 32,000	1 in 130,000
		Ashkenazi Jewish	99	1 in 300	1 in 30,000	1 in 120,000
		East Asian	99	1 in 122	1 in 12,000	1 in 48,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	1 in 299	1 in 30,000	1 in 120,000
		South Asian	99	1 in 312	1 in 31,000	1 in 120,000
		Other (population not assigned)	99	1 in 293	1 in 29,000	1 in 120,000
		US general population	99	1 in 288	1 in 29,000	1 in 120,000
CYP27B1	Vitamin D-dependent rickets	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	98	1 in 458	1 in 23,000	1 in 92,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Finnish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Non-Finnish European/White	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		South Asian	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Other (population not assigned)	99	1 in 397	1 in 40,000	1 in 160,000
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000