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
RAB23	Carpenter 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
RAG1	Omenn syndrome	African American/Black	99	1 in 478	1 in 48,000	1 in 190,000
		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 420	1 in 42,000	1 in 170,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	1 in 421	1 in 42,000	1 in 170,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	1 in 331	1 in 33,000	1 in 130,000
		US general population	99	1 in 445	1 in 44,000	1 in 180,000
RAG2	Omenn 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	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	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
RAPSN	Congenital myasthenic syndrome	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	1 in 340	1 in 34,000	1 in 140,000
		Ashkenazi Jewish	99	1 in 247	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 169	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 451	1 in 45,000	1 in 180,000
		US general population	99	1 in 227	1 in 23,000	1 in 92,000
RARS2	Pontocerebellar hypoplasia	African American/Black	98	1 in 421	1 in 21,000	1 in 84,000
		Latino/Admixed American	99	1 in 199	1 in 20,000	1 in 80,000
		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 364	1 in 18,000	1 in 72,000
		South Asian	99	1 in 478	1 in 48,000	1 in 190,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	1 in 328	1 in 33,000	1 in 130,000
RD3	Leber congenital amaurosis	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	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
RDH12	Leber congenital amaurosis	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	1 in 474	1 in 47,000	1 in 190,000
		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 432	1 in 43,000	1 in 170,000
		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
RFX5	Bare lymphocyte syndrome type II	African American/Black	99	1 in 475	1 in 47,000	1 in 190,000
		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 406	1 in 41,000	1 in 160,000
		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
RFXANK	Bare lymphocyte syndrome type II	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	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	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
RFXAP	Bare lymphocyte syndrome type II	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	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
RLBP1	Retinitis pigmentosa	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 366	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 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
RMRP	Cartilage-hair hypoplasia	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	98	1 in 184	1 in 9,200	1 in 37,000
		Ashkenazi Jewish	99	1 in 70	1 in 6,900	1 in 28,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	1 in 55	1 in 5,400	1 in 22,000
		Non-Finnish European/White	99	1 in 292	1 in 29,000	1 in 120,000
		South Asian	99	1 in 385	1 in 38,000	1 in 150,000
		Other (population not assigned)	98	1 in 92	1 in 4,600	1 in 18,000
		US general population	99	1 in 278	1 in 28,000	1 in 110,000
RNASEH2A	Aicardi-Goutières syndrome	African American/Black	97	1 in 285	1 in 9,500	1 in 38,000
		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	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	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
RNASEH2B	Aicardi-Goutières syndrome	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	1 in 434	1 in 43,000	1 in 170,000
		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 195	1 in 19,000	1 in 76,000
		South Asian	99	1 in 295	1 in 29,000	1 in 120,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	99	1 in 260	1 in 26,000	1 in 100,000
RNASEH2C	Aicardi-Goutières 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	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

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
RP2	Retinitis pigmentosa	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	97	N/A	N/A	N/A
		Other (population not assigned)	99	N/A	N/A	N/A
		US general population	97	N/A	N/A	N/A
RPE65	Leber congenital amaurosis	African American/Black	99	1 in 199	1 in 20,000	1 in 80,000
		Latino/Admixed American	98	1 in 406	1 in 20,000	1 in 80,000
		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 412	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 413	1 in 41,000	1 in 160,000
		US general population	99	1 in 370	1 in 37,000	1 in 150,000
RPGR	Retinitis pigmentosa	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	97	N/A	N/A	N/A
		Finnish	99	N/A	N/A	N/A
		Non-Finnish European/White	97	N/A	N/A	N/A
		South Asian	97	N/A	N/A	N/A
		Other (population not assigned)	99	N/A	N/A	N/A
		US general population	97	N/A	N/A	N/A
RPGRIP1	Leber congenital amaurosis	African American/Black	98	1 in 287	1 in 14,000	1 in 56,000
		Latino/Admixed American	98	1 in 283	1 in 14,000	1 in 56,000
		Ashkenazi Jewish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		East Asian	99	1 in 306	1 in 31,000	1 in 120,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	98	1 in 452	1 in 23,000	1 in 92,000
		South Asian	98	1 in 413	1 in 21,000	1 in 84,000
		Other (population not assigned)	98	1 in 269	1 in 13,000	1 in 52,000
		US general population	98	1 in 371	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
RPGRIP1L	Joubert syndrome and related disorders, including Meckel-Gruber syndrome	African American/Black	98	1 in 285	1 in 14,000	1 in 56,000
		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 456	1 in 23,000	1 in 92,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	1 in 301	1 in 30,000	1 in 120,000
		South Asian	98	1 in 347	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	99	1 in 347	1 in 35,000	1 in 140,000
RPS6KA3	Coffin-Lowry 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	97	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	97	N/A	N/A	N/A
RS1	Juvenile retinoschisis, 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	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
SACS	Autosomal recessive spastic ataxia of Charlevoix-Saguenay (ARSACS)	African American/Black	98	1 in 233	1 in 12,000	1 in 48,000
		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	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Non-Finnish European/White	98	1 in 307	1 in 15,000	1 in 60,000
		South Asian	98	1 in 474	1 in 24,000	1 in 96,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	98	1 in 335	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
SAMHD1	Aicardi-Goutières 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	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
SCO2	Mitochondrial complex deficiency	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 225	1 in 22,000	1 in 88,000
		East Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	97	1 in 61	1 in 2,000	1 in 8,000
		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
SDCCAG8	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	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)	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
SDR9C7	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 416	1 in 42,000	1 in 170,000
		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
SELENON	SELENON-related disorders	African American/Black	97	1 in 239	1 in 7,900	1 in 32,000
		Latino/Admixed American	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Ashkenazi Jewish	97	1 in 345	1 in 11,000	1 in 44,000
		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 409	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)	98	1 in 474	1 in 24,000	1 in 96,000
		US general population	98	1 in 441	1 in 22,000	1 in 88,000
SEPSECS	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	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	99	1 in 163	1 in 16,000	1 in 64,000
		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
SERPINF1	Osteogenesis imperfecta, autosomal recessive	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	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)	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
SGCA	Limb-girdle muscular dystrophy	African American/Black	99	1 in 469	1 in 47,000	1 in 190,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	1 in 283	1 in 28,000	1 in 110,000
		East Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	1 in 266	1 in 27,000	1 in 110,000
		Non-Finnish European/White	99	1 in 348	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 341	1 in 34,000	1 in 140,000
		US general population	99	1 in 430	1 in 43,000	1 in 170,000

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
SGCB	Limb-girdle muscular 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	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
SGCD	Limb-girdle muscular dystrophy	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	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
SGCG	Limb-girdle muscular dystrophy	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	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	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
SGSH	Mucopolysaccharidosis type III	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	1 in 474	1 in 47,000	1 in 190,000
		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 463	1 in 46,000	1 in 180,000
		Non-Finnish European/White	99	1 in 232	1 in 23,000	1 in 92,000
		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 298	1 in 30,000	1 in 120,000

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
SKIC2	Trichohepatoenteric syndrome	African American/Black	98	1 in 337	1 in 17,000	1 in 68,000
		Latino/Admixed American	98	1 in 342	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	98	1 in 347	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 362	1 in 18,000	1 in 72,000
SKIC3	Trichohepatoenteric syndrome	African American/Black	99	1 in 404	1 in 40,000	1 in 160,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	1 in 370	1 in 37,000	1 in 150,000
		East Asian	99	1 in 121	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	98	1 in 483	1 in 24,000	1 in 96,000
		South Asian	99	1 in 215	1 in 21,000	1 in 84,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	98	1 in 452	1 in 23,000	1 in 92,000
SLC2A10	Arterial tortuosity 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	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
SLC4A11	Corneal dystrophy and perceptive deafness	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	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

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
SLC6A8	Cerebral creatine deficiency syndromes	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	97	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	97	N/A	N/A	N/A
SLC7A7	Lysinuric protein intolerance	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 110	1 in 11,000	1 in 44,000
		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
SLC12A1	Bartter syndrome	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	1 in 465	1 in 46,000	1 in 180,000
		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	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
SLC12A6	Andermann syndrome	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	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
SLC16A2	Allan-Herndon-Dudley 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	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
SLC17A5	Sialic acid storage disorders	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	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Finnish	99	1 in 83	1 in 8,200	1 in 33,000
		Non-Finnish European/White	99	1 in 362	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 479	1 in 24,000	1 in 96,000
		US general population	99	1 in 471	1 in 47,000	1 in 190,000
SLC19A3	Basal ganglia disease, biotin-thiamine-responsive	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	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
SLC22A5	Systemic primary carnitine deficiency	African American/Black	99	1 in 228	1 in 23,000	1 in 92,000
		Latino/Admixed American	99	1 in 112	1 in 11,000	1 in 44,000
		Ashkenazi Jewish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	1 in 75	1 in 7,400	1 in 30,000
		Finnish	99	1 in 227	1 in 23,000	1 in 92,000
		Non-Finnish European/White	99	1 in 114	1 in 11,000	1 in 44,000
		South Asian	99	1 in 48	1 in 4,700	1 in 19,000
		Other (population not assigned)	99	1 in 211	1 in 21,000	1 in 84,000
		US general population	99	1 in 117	1 in 12,000	1 in 48,000

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
SLC25A13	Citrullinemia	African American/Black	98	1 in 406	1 in 20,000	1 in 80,000
		Latino/Admixed American	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Ashkenazi Jewish	99	1 in 266	1 in 27,000	1 in 110,000
		East Asian	98	1 in 58	1 in 2,900	1 in 12,000
		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 486	1 in 49,000	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 494	1 in 49,000	1 in 200,000
SLC25A15	Ornithine translocase deficiency	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	99	1 in 301	1 in 30,000	1 in 120,000
		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	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
SLC25A20	Carnitine-acylcarnitine translocase 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 497	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
SLC26A2	Sulfate transporter-related osteochondrodysplasias, includes achondrogenesis type 1B, atelosteogenesis type 2, diastrophic dysplasia, and recessive multiple epiphyseal dysplasia	African American/Black	98	1 in 433	1 in 22,000	1 in 88,000
		Latino/Admixed American	99	1 in 256	1 in 26,000	1 in 100,000
		Ashkenazi Jewish	99	1 in 216	1 in 22,000	1 in 88,000
		East Asian	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Finnish	99	1 in 70	1 in 6,900	1 in 28,000
		Non-Finnish European/White	99	1 in 144	1 in 14,000	1 in 56,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	99	1 in 348	1 in 35,000	1 in 140,000
		US general population	99	1 in 184	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
SLC26A4	Pendred syndrome	African American/Black	99	1 in 154	1 in 15,000	1 in 60,000
		Latino/Admixed American	99	1 in 97	1 in 9,600	1 in 38,000
		Ashkenazi Jewish	99	1 in 67	1 in 6,600	1 in 26,000
		East Asian	99	1 in 52	1 in 5,100	1 in 20,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	99	1 in 79	1 in 7,800	1 in 31,000
		South Asian	99	1 in 77	1 in 7,600	1 in 30,000
		Other (population not assigned)	99	1 in 138	1 in 14,000	1 in 56,000
		US general population	99	1 in 87	1 in 8,600	1 in 34,000
SLC27A4	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	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)	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
SLC35A3	Arthrogryposis, mental retardation, and seizures (AMRS)	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 373	1 in 37,000	1 in 150,000
		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	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
SLC37A4	Glycogen storage disease type I	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	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	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	98	1 in 481	1 in 24,000	1 in 96,000
		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
SLC39A4	Acrodermatitis enteropathica	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	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	97	1 in 278	1 in 9,200	1 in 37,000
		Non-Finnish European/White	98	1 in 386	1 in 19,000	1 in 76,000
		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
SLC46A1	Hereditary folate malabsorption	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	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	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
SMARCAL1	Schimke immunoosseous dysplasia	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 192	1 in 19,000	1 in 76,000
		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	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	Population	Detection rate (%) (Copy	Pre-test carrier risk	Post-test risk of being a carrier with 2 copies**		Post-test risk of being a
					POSITIVE for the c.*3+80T>G SNP	NEGATIVE for the c.*3+80T>G SNP	
SMN1	Spinal muscular atrophy	Ashkenazi Jewish	92.8	1 in 67	High risk	1 in 918	1 in 5400
		Asian	93.6	1 in 59	High risk	1 in 907	1 in 5600
		Black	90.3	1 in 72	1 in 34	1 in 375	1 in 4200
		Hispanic	92.6	1 in 68	1 in 140	1 in 906	1 in 5400
		White	95.0	1 in 47	1 in 29	1 in 921	1 in 5600
		Mixed or other ethnic background	For counseling purposes, consider using the ethnic background with the most conservative risk estimates.				

Footnotes:

** includes carriers who are silent carriers (2+0) and carriers with a pathogenic variant not detected in this assay

Feng, PMID 28125085; Luo, PMID 23788250

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
SMPD1	Niemann-Pick disease types A and B	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 107	1 in 11,000	1 in 44,000
		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 460	1 in 46,000	1 in 180,000
		South Asian	99	1 in 304	1 in 30,000	1 in 120,000
		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
SP110	Hepatic venoocclusive disease with immunodeficiency	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
SPATA7	Leber congenital amaurosis	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)	98	1 in 402	1 in 20,000	1 in 80,000

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
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
SPG11	Hereditary spastic paraplegia	African American/Black	98	1 in 172	1 in 8,600	1 in 34,000
		Latino/Admixed American	97	1 in 390	1 in 13,000	1 in 52,000
		Ashkenazi Jewish	99	1 in 388	1 in 39,000	1 in 160,000
		East Asian	97	1 in 291	1 in 9,700	1 in 39,000
		Finnish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Non-Finnish European/White	98	1 in 168	1 in 8,400	1 in 34,000
		South Asian	98	1 in 325	1 in 16,000	1 in 64,000
		Other (population not assigned)	97	1 in 365	1 in 12,000	1 in 48,000
		US general population	98	1 in 197	1 in 9,800	1 in 39,000
SPG21	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 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	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
STAR	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	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		East Asian	99	1 in 406	1 in 41,000	1 in 160,000
		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
STK4	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	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

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
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
STX11	Familial hemophagocytic lymphohistiocytosis	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	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
STXBP2	Familial hemophagocytic lymphohistiocytosis	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 368	1 in 12,000	1 in 48,000
		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 415	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 500	< 1 in 50,000	< 1 in 200,000
SUMF1	Multiple sulfatase 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 273	1 in 27,000	1 in 110,000
		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	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
SUOX	Sulfite oxidase deficiency	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 377	1 in 38,000	1 in 150,000
		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

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
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
SURF1	Leigh syndrome	African American/Black	98	1 in 405	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 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 341	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)	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		US general population	98	1 in 405	1 in 20,000	1 in 80,000
SYNE4	Deafness and hearing loss, nonsyndromic	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	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
TAT	Tyrosinemia 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
TAFAZZIN	Barth 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	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

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
		US general population	99	N/A	N/A	N/A
TCIRG1	Osteopetrosis	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	99	1 in 467	1 in 47,000	1 in 190,000
		Ashkenazi Jewish	99	1 in 417	1 in 42,000	1 in 170,000
		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 417	1 in 42,000	1 in 170,000
		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 466	1 in 47,000	1 in 190,000
TCTN1	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	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	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
TCTN2	Joubert syndrome and related disorders, including Meckel-Gruber syndrome	African American/Black	98	1 in 450	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	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	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		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
TCTN3	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	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Ashkenazi Jewish	99	1 in 418	1 in 42,000	1 in 170,000
		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 419	1 in 21,000	1 in 84,000
		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

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
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
TECPR2	Hereditary spastic paraplegia	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	97	1 in 155	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 500	< 1 in 17,000	< 1 in 68,000
		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
TF	Atransferrinemia	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	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
TFR2	Hereditary hemochromatosis	African American/Black	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Latino/Admixed American	97	1 in 474	1 in 16,000	1 in 64,000
		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	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
TGM1	Autosomal recessive congenital ichthyosis (ARCI)	African American/Black	99	1 in 275	1 in 27,000	1 in 110,000
		Latino/Admixed American	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	1 in 463	1 in 46,000	1 in 180,000
		East Asian	99	1 in 295	1 in 29,000	1 in 120,000
		Finnish	99	1 in 195	1 in 19,000	1 in 76,000
		Non-Finnish European/White	99	1 in 221	1 in 22,000	1 in 88,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	1 in 265	1 in 26,000	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
		US general population	99	1 in 265	1 in 26,000	1 in 100,000
TH	Tyrosine hydroxylase 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 288	1 in 29,000	1 in 120,000
		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
TK2	Mitochondrial DNA depletion syndrome, TK2-related	African American/Black	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Latino/Admixed American	99	1 in 444	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 500	< 1 in 50,000	< 1 in 200,000
		Finnish	99	1 in 264	1 in 26,000	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
TMEM38B	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	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
TMEM67	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	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Ashkenazi Jewish	99	1 in 221	1 in 22,000	1 in 88,000
		East Asian	98	1 in 373	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 245	1 in 24,000	1 in 96,000
		South Asian	98	1 in 347	1 in 17,000	1 in 68,000
		Other (population not assigned)	99	1 in 270	1 in 27,000	1 in 110,000

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
		US general population	99	1 in 305	1 in 30,000	1 in 120,000
TMEM70	Mitochondrial complex V 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 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
TMEM138	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	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	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
TMEM216	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 148	1 in 15,000	1 in 60,000
		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
TMEM231	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	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	1 in 412	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
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
TMEM237	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	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
TNFSF11	Osteopetrosis	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
TNXB	Ehlers–Danlos-like 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	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
TPP1	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	98	1 in 281	1 in 14,000	1 in 56,000
		Non-Finnish European/White	99	1 in 281	1 in 28,000	1 in 110,000
		South Asian	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Other (population not assigned)	99	1 in 318	1 in 32,000	1 in 130,000

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
		US general population	99	1 in 361	1 in 36,000	1 in 140,000
TRAPPC11	Limb-girdle muscular dystrophy	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 421	1 in 42,000	1 in 170,000
		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
TRIM32	Limb-girdle muscular 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	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	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
TRMU	Acute infantile liver failure	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	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 400	1 in 20,000	1 in 80,000
		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
TSEN2	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	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 282	1 in 28,000	1 in 110,000

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
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
TSEN34	Pontocerebellar hypoplasia	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
TSEN54	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	99	1 in 242	1 in 24,000	1 in 96,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	99	1 in 306	1 in 31,000	1 in 120,000
		US general population	99	1 in 332	1 in 33,000	1 in 130,000
TSFM	Combined oxidative phosphorylation 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	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 35	1 in 3,400	1 in 14,000
		Non-Finnish European/White	99	1 in 483	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 307	1 in 31,000	1 in 120,000
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
TTC7A	Severe combined immunodeficiency (SCID)	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

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
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
TTC8	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	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
TTPA	Ataxia with vitamin E deficiency	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	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
TULP1	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 373	1 in 37,000	1 in 150,000
		Finnish	97	1 in 417	1 in 14,000	1 in 56,000
		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
TYMP	Mitochondrial neurogastrointestinal encephalopathy (MNGIE) disease	African American/Black	99	1 in 417	1 in 42,000	1 in 170,000
		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	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	99	1 in 410	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
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
TYR	Oculocutaneous albinism	African American/Black	99	1 in 106	1 in 11,000	1 in 44,000
		Latino/Admixed American	99	1 in 86	1 in 8,500	1 in 34,000
		Ashkenazi Jewish	99	1 in 21	1 in 2,000	1 in 8,000
		East Asian	99	1 in 158	1 in 16,000	1 in 64,000
		Finnish	99	1 in 42	1 in 4,100	1 in 16,000
		Non-Finnish European/White	99	1 in 51	1 in 5,000	1 in 20,000
		South Asian	99	1 in 99	1 in 9,800	1 in 39,000
		Other (population not assigned)	99	1 in 49	1 in 4,800	1 in 19,000
		US general population	99	1 in 62	1 in 6,100	1 in 24,000
UNC13D	Familial hemophagocytic lymphohistiocytosis	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 293	1 in 15,000	1 in 60,000
		South Asian	99	1 in 471	1 in 47,000	1 in 190,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	98	1 in 383	1 in 19,000	1 in 76,000
UNG	Immunodeficiency with hyper IgM syndrome	African American/Black	97	1 in 436	1 in 15,000	1 in 60,000
		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	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
USH1C	Usher syndrome (hearing loss and retinitis pigmentosa)	African American/Black	98	1 in 498	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 235	1 in 7,800	1 in 31,000
		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)	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
		US general population	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
USH1G	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	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	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
USH2A	Usher syndrome (hearing loss and retinitis pigmentosa)	African American/Black	98	1 in 87	1 in 4,300	1 in 17,000
		Latino/Admixed American	99	1 in 54	1 in 5,300	1 in 21,000
		Ashkenazi Jewish	99	1 in 44	1 in 4,300	1 in 17,000
		East Asian	99	1 in 67	1 in 6,600	1 in 26,000
		Finnish	98	1 in 142	1 in 7,100	1 in 28,000
		Non-Finnish European/White	99	1 in 55	1 in 5,400	1 in 22,000
		South Asian	99	1 in 132	1 in 13,000	1 in 52,000
		Other (population not assigned)	99	1 in 61	1 in 6,000	1 in 24,000
		US general population	99	1 in 59	1 in 5,800	1 in 23,000
VLDLR	Cerebellar hypoplasia, VLDLR-associated	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 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
VPS13A	Choreacanthocytosis	African American/Black	98	1 in 367	1 in 18,000	1 in 72,000
		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 400	1 in 20,000	1 in 80,000
		Finnish	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Non-Finnish European/White	98	1 in 352	1 in 18,000	1 in 72,000
		South Asian	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Other (population not assigned)	98	1 in 420	1 in 21,000	1 in 84,000

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
		US general population	98	1 in 387	1 in 19,000	1 in 76,000
VPS13B	Cohen syndrome	African American/Black	99	1 in 217	1 in 22,000	1 in 88,000
		Latino/Admixed American	99	1 in 457	1 in 46,000	1 in 180,000
		Ashkenazi Jewish	97	1 in 280	1 in 9,300	1 in 37,000
		East Asian	99	1 in 271	1 in 27,000	1 in 110,000
		Finnish	97	1 in 123	1 in 4,100	1 in 16,000
		Non-Finnish European/White	98	1 in 225	1 in 11,000	1 in 44,000
		South Asian	98	1 in 323	1 in 16,000	1 in 64,000
		Other (population not assigned)	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		US general population	98	1 in 254	1 in 13,000	1 in 52,000
VPS45	Severe congenital neutropenia	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	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
VPS53	Pontocerebellar hypoplasia	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	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)	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
VRK1	Pontocerebellar hypoplasia	African American/Black	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Latino/Admixed American	99	1 in 456	1 in 46,000	1 in 180,000
		Ashkenazi Jewish	99	1 in 297	1 in 30,000	1 in 120,000
		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 202	1 in 20,000	1 in 80,000

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
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
WAS	Wiskott-Aldrich 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	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
WHRN	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	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	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
WNT1	Osteogenesis imperfecta, autosomal recessive	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	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
WRN	Werner syndrome	African American/Black	98	1 in 408	1 in 20,000	1 in 80,000
		Latino/Admixed American	98	1 in 471	1 in 24,000	1 in 96,000
		Ashkenazi Jewish	99	1 in 428	1 in 43,000	1 in 170,000
		East Asian	98	1 in 259	1 in 13,000	1 in 52,000
		Finnish	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
		Non-Finnish European/White	98	1 in 335	1 in 17,000	1 in 68,000
		South Asian	98	1 in 354	1 in 18,000	1 in 72,000
		Other (population not assigned)	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
		US general population	98	1 in 363	1 in 18,000	1 in 72,000
XPA	Xeroderma pigmentosum	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	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	99	1 in 155	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
XPC	Xeroderma pigmentosum	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	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)	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
ZAP70	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	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	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
ZBTB24	Immunodeficiency-centromeric instability-facial anomalies (ICF) 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	98	< 1 in 500	< 1 in 25,000	< 1 in 100,000
		Finnish	99	1 in 493	1 in 49,000	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)	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
		US general population	99	< 1 in 500	< 1 in 50,000	< 1 in 200,000
ZNF469	Brittle cornea 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	97	< 1 in 500	< 1 in 17,000	< 1 in 68,000
		Finnish	99	1 in 106	1 in 11,000	1 in 44,000
		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