Fairfax Cryobank
The Trusted Choice for Donor Sperm

Donor 4254

Genetic Testing Summary

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

Last Updated: 08/23/18

Donor Reported Ancestry: Sri Lankan Jewish Ancestry: No

Genetic Test*	Result	Comments/Donor's Residual Risk**
Chromosome analysis (karyotype)	Normal male karyotype	No evidence of clinically significant chromosome abnormalities
Hemoglobin evaluation	Normal hemoglobin fractionation and MCV/MCH results	Reduced risk to be a carrier for sickle cell anemia, beta thalassemia, alpha thalassemia trait (aa/-- and a-/a-) and other hemoglobinopathies
Cystic Fibrosis (CF) carrier screening	Negative by genotyping of 99 mutations in the CFTR gene	1/190
Spinal Muscular Atrophy (SMA) carrier screening	Negative for deletions of exon 7 in the SMN1 gene	1/270
Hb Beta Chain-Related Hemoglobinopathy (including Beta Thalassemia and Sickle Cell Disease) by genotyping	Negative for 37 mutations tested in the HBB gene	1/130 for Beta-Thalassemia <1/500 for Sickle Cell

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

**Donor residual risk is the chance the donor is still a carrier after testing negative.

Counsyl

Results Recipient

Fairfax Cryobank - [redacted]
Attn: Dr. Harvey Stern
[redacted]
Report Date: 04/13/2012

Male

Name: DONOR 4254
DOB: [redacted]
Ethnicity: Southeast Asian
Sample Type: EDTA Blood
Date of Collection: 04/03/2012
Date Received: 04/05/2012
Barcode: [redacted]
Indication: Egg or Sperm Donor

Female

Not tested

Counsyl Test Results (Egg or Sperm Donor)

The Counsyl test (**Fairfax Cryobank Fundamental Panel**) uses targeted DNA mutation analysis to simultaneously determine the carrier status of an individual for **128 variants** associated with **4 diseases**. This report indicates which mutations, if any, were detected for each mutation panel. Because only select mutations are tested, the percentage of carriers detected varies by ethnicity. A full list of mutations tested is given on page 2. A negative test result does not eliminate the possibility that the individual is a carrier. Interpretation is given as an estimate of the risk of conceiving a child affected with a disease, which is based on reported ethnicity, the test results, and an assumption of no family history.*

DONOR 4254

DONOR 4254's DNA test shows that he is not a carrier of any disease-causing mutation tested.

Partner

The reproductive risk presented is based on a hypothetical pairing with a partner of the same ethnic group.

Reproductive Risk Summary

No increased reproductive risks to highlight. Please refer to the following pages for detailed information about the results.

Clinical notes:

- Individuals of African, Southeast Asian, and Mediterranean ancestry are at increased risk for being carriers for hemoglobinopathies and may also benefit from carrier testing by CBC and hemoglobin electrophoresis or HPLC. *ACOG Practice Bulletin No. 78. Obstet Gynecol 2007;109:229-37.*
- Genetic counseling is recommended. To schedule a free appointment to speak with a genetic counselor about your results, please visit www.counsyl.com/appointment.

Lab Directors:

Jessica Jacobson, MD

William Seltzer, PhD, FACMG

ENTERED 4/30/12

*Limitations: In an unknown number of cases, nearby genetic variants may interfere with mutation detection. The test is not validated for detection of homozygous mutations, and although rare, asymptomatic individuals affected by the disease may not be genotyped accurately. Other possible sources of diagnostic error include sample mix-up, trace contamination, and technical errors. The reproductive risk summary is provided as an aid to genetic counseling. Inaccurate reporting of ethnicity may cause errors in risk calculation. For the purposes of risk calculations, it is assumed that mutations within the same gene are on different chromosomes.

This test was developed and its performance characteristics determined by Counsyl, Inc. The laboratory is regulated under the Clinical Laboratory Improvement Amendments of 1988 (CLIA) as qualified to perform high-complexity clinical testing. This test is used for clinical purposes. It should not be regarded as investigational or for research. These results are adjunctive to the ordering physician's workup. CLIA Number: #05D1102604.

Counsyl

Male

Name: DONOR 4254
DOB: [redacted]

Female

Not tested

Mutations Tested

Beta Thalassemia - Gene: HBB. **Variants (27):** K17X, Q39X, Phe41fs, Ser9fs, IVS-II-654, IVS-II-745, IVS-II-850, IVS-I-6, IVS-I-110, IVS-I-5, IVS-I-1(G>A), -88C>T, -28A>G, -29A>G, Lys8fs, Phe71fs, IVS-II-849(A>C), IVS-II-849(A>G), Gly24 T>A, -87C>G, Hb C, W15X, Gly16fs, Glu6fs, Hb E, Hb D-Punjab, Hb O-Arab. **Detection rate:** Southeast Asian 86%.

Cystic Fibrosis - Gene: CFTR. **Variants (99):** G85E, R117H, R334W, R347P, A455E, G542X, G551D, R553X, R560T, R1162X, W1282X, N1303K, F508del, I507del, 2184delA, 3659delC, 621+1G>T, 711+1G>T, 1717-1G>A, 1898+1G>A, 2789+5G>A, 3120+1G>A, 3849+10kbC>T, E60X, R75X, E92X, Y122X, G178R, R347H, Q493X, V520F, S549N, P574H, M1101K, D1152H, 2143delT, 394delTT, 444delA, 1078delT, 3876delA, 3905insT, 1812-1G>A, 3272-26A>G, 2183AA>G, S549R(A>C), R117C, L206W, G330X, T338I, R352Q, S364P, G480C, C524X, S549R(T>G), Q552X, A559T, G622D, R709X, K710X, R764X, Q890X, R1066C, W1089X, Y1092X, R1158X, S1196X, W1204X(c.3611G>A), Q1238X, S1251N, S1255X, 3199del6, 574delA, 663delT, 935delA, 936delTA, 1677delTA, 1949del84, 2043delG, 2055del9>A, 2108delA, 3171delC, 3667del4, 3791delC, 1288insTA, 2184insA, 2307insA, 2869insG, 296+12T>C, 405+1G>A, 405+3A>C, 406-1G>A, 711+5G>A, 712-1G>T, 1898+1G>T, 1898+5G>T, 3120G>A, 457TAT>G, 3849+4A>G, Q359K/T360K. **Detection rate:** Southeast Asian 54%.

Sickle Cell Disease - Gene: HBB. **Variants (28):** Hb S, K17X, Q39X, Phe41fs, Ser9fs, IVS-II-654, IVS-II-745, IVS-II-850, IVS-I-6, IVS-I-110, IVS-I-5, IVS-I-1(G>A), -88C>T, -28A>G, -29A>G, Lys8fs, Phe71fs, IVS-II-849(A>C), IVS-II-849(A>G), Gly24 T>A, -87C>G, Hb C, W15X, Gly16fs, Glu6fs, Hb E, Hb D-Punjab, Hb O-Arab. **Detection rate:** Southeast Asian 50%.

Spinal Muscular Atrophy - Gene: SMN1. **Variants (1):** Exon 7 deletion. **Detection rate:** Southeast Asian 93%.

Counsyl

Male

Name: DONOR 4254
DOB: [redacted]

Female

Not tested

Risk Calculations

Below are the full test results for all diseases on the panel. Listed in this section is the patient's post-test risk of being a carrier of each disease as well as the odds that his future children could inherit each disease.

A negative result does not rule out the possibility of being a carrier of untested mutations. Estimates of post-test carrier risk assume a negative family history.

Disease	Donor 4254 Residual Risk	Post-test Reproductive Risk	Pre-test Reproductive Risk
Beta Thalassemia	1 in 130	1 in 9,500	1 in 1,300
Cystic Fibrosis	1 in 190	1 in 66,000	1 in 30,000
Sickle Cell Disease	< 1 in 500	< 1 in 1,000,000	< 1 in 1,000,000
Spinal Muscular Atrophy	1 in 720	1 in 150,000	1 in 11,000

Integrated GENETICS
LabCorp Specialty Testing Group

Chromosome Analysis

atient Name: Donor #4254, .
eferring Physician:
pecimen #: [redacted]
atient ID: [redacted]

Client #: [redacted]

Fairfax Cryobank / Genetics and IVF Institute
[redacted]

OB: Not Given
SN:

Date Collected: 04/03/2012
Date Received: 04/04/2012
Lab ID:
Hospital ID:
Specimen Type: **Peripheral Blood**

dication: Gamete donor

etaphases Counted:	20			**Banding Technique:**	GTW
etaphases Analyzed:	5	**Number of Cultures:**	2	**Banding Resolution:**	500
etaphases Karyotyped:	3			**Dept. Section:**	B1

RESULTS: 46,XY
Male karyotype

ITERPRETATION:

his analysis shows no evidence of clinically significant numerical or structural chromosome abnormalities. he standard cytogenetic methodology utilized in this analysis does not routinely detect subtle rearrangements low-level mosaicism and cannot detect microdeletions. Also, it cannot detect molecular cytogenetic normalities (such as microdeletions and microduplications) that may be detectable by microarray analysis.

gned: Joseph J. Weiser

Joseph J. Weiser, Ph. D.

ENTERED 4/30/12

Date: 04/10/2012

Testing Performed At Esoterix Genetic Laboratories, LLC 2000 Vivigen Way Santa Fe, NM 87505 1-800-848-4436

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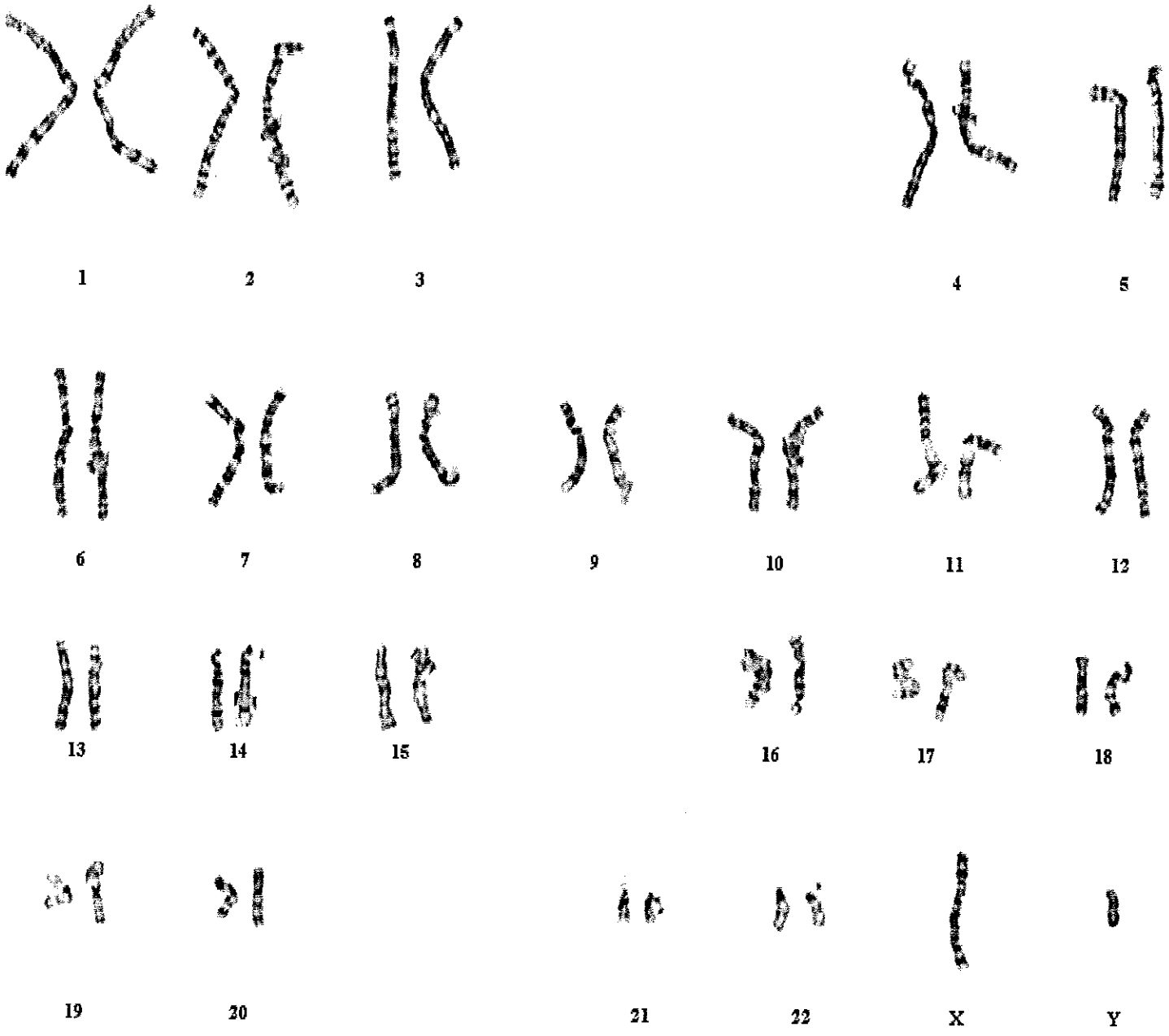
LabCorp Specialty Testing Group



Specimen #[redacted]
Specimen Type: BLDPER
Patient Name: Donor #4254, .
Image ID: CKE1
Karyotype: 46,XY

Dept ID: B1
Date Received: 04/04/2012
Date Reviewed: 04/10/2012
Reviewed By: JJW

Quest Diagnostics

Report Status: Final

DONOR, 4254

Patient Information	Specimen Information	Client Information
DONOR, 4254 **DOB** [redacted] **AGE:** [redacted] Gender: M Phone: NG Patient ID: [redacted]	Specimen: [redacted] Requisition: 0000044 Collected: 04/03/2012 Received: 04/04/2012 / 05:48 CDT Reported: 04/07/2012 / 15:46 CDT	Client #: [redacted] FAIRFAX CRYOBANK [redacted]

Test Name	In Range	Out Of Range	Reference Range	Lab
HEMOGLOBINOPATHY EVALUATION				
RED BLOOD CELL COUNT	4.90		4.20-5.80 Million/uL	IG
HEMOGLOBIN	15.4		13.2-17.1 g/dL	
HEMATOCRIT	45.5		38.5-50.0 %	
MCV	92.9		80.0-100.0 fL	
MCH	31.5		27.0-33.0 pg	
RDW	14.2		11.0-15.0 %	
HEMOGLOBIN A	97.9		>96.0 %	IG
HEMOGLOBIN F	<1.0		<2.0 %	
HEMOGLOBIN A2 (QUANT)	2.1		1.8-3.5 %	
INTERPRETATION				
Normal phenotype.				
CHOLESTEROL, TOTAL	164		125-200 mg/dL	IG
AST	11		10-40 U/L	IG
ALT	12		9-60 U/L	IG
CBC (INCLUDES DIFF/PLT)				IG
WHITE BLOOD CELL COUNT	7.2		3.8-10.8 Thousand/uL	
RED BLOOD CELL COUNT	4.90		4.20-5.80 Million/uL	
HEMOGLOBIN	15.4		13.2-17.1 g/dL	
HEMATOCRIT	45.5		38.5-50.0 %	
MCV	92.9		80.0-100.0 fL	
MCH	31.5		27.0-33.0 pg	
MCHC	33.9		32.0-36.0 g/dL	
RDW	14.2		11.0-15.0 %	
PLATELET COUNT	199		140-400 Thousand/uL	
ABSOLUTE NEUTROPHILS	4802		1500-7800 cells/uL	
ABSOLUTE LYMPHOCYTES	1714		850-3900 cells/uL	
ABSOLUTE MONOCYTES	511		200-950 cells/uL	
ABSOLUTE EOSINOPHILS	137		15-500 cells/uL	
ABSOLUTE BASOPHILS	36		0-200 cells/uL	
NEUTROPHILS	66.7		%	
LYMPHOCYTES	23.8		%	
MONOCYTES	7.1		%	
EOSINOPHILS	1.9		%	
BASOPHILS	0.5		%	
ABO GROUP AND RH TYPE				IG
ABO GROUP	A			
RH TYPE	RH(D) POSITIVE			

PERFORMING SITE:

IG QUEST DIAGNOSTICS-IRVING, 4770 REGENT BLVD., IRVING, TX 75063 Laboratory Director: ELISABETH S BROCKIE, DO, CLIA: 45D0697943

FAIRFAX CRYO BANK 4/30/12