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Jonathan R. Genzen, MD, PhD, Chief Medical Officer

PATIENT REPORT

Client: ARUP Example Report Only
500 Chipeta Way
Salt Lake City, UT 84108-
USA

Provider: .108 -TEST,

Patient: **RBC GENO, POSITIVE**
DOB:
Sex: Male
Patient Identifiers: 40660
Visit Number (FIN): 40985
Client Supplied ID:

Specimen Collected: 19-Sep-22 16:29

Red Blood Cell Antigen Genotyping | Received: 19-Sep-22 16:38 Report/Verified: 20-Sep-22 12:27

Procedure	Result	Units	Reference Interval
RBC Antigen Genotyping Specimen	Whole Blood		
Rh Antigen C/c	C-c+		
Rh Antigen E/e	E-e+		
Rh Antigen V/VS	V-VS-		
Kell Antigen K/k	K-k+		
Kell Antigen Kpa/Kpb	Kp(a-b+)		
Kell Antigen Jsa/Jsb	Js(a-b+)		
Duffy Antigen Fya/Fyb	Fy(a+b+)		
Kidd Antigen Jka/Jkb	Jk(a+b-)		
MNS Antigen MN	M-N+		
MNS Antigen S/s/U	S-s+U+		
Lutheran Antigen Lua/Lub	Lu(a-b+)		
Diego Antigen Dia/Dib	Di(a-b+)		
Colton Antigen Coa/Cob	Co(a+b-)		
Dombrock Antigen Doa/Dob	Do(a+b-)		
Dombrock Antigen Hy	Hy+		
Dombrock Antigen Joa	Joa+		
Landsteiner-Wiener Antigen LWa/LWb	LW(a+b-)		
Scianna Antigen Sc1/Sc2	Sc:1,-2		
Hemoglobin S Antigen	Negative		
RBC Antigen Genotyping Interpretation	See Note [f1 i1]		

Result Footnote

f1: RBC Antigen Genotyping Interpretation
One copy of the Fy(a) allele and one copy of the Fy(b) allele were detected. This genotype is predictive of an Fy(a+b+) (FY: 1,2) phenotype.

Two copies of the s allele were identified. This genotype is predictive of an S-s+U+ (MNS: -3, 4, 5) phenotype.

Indication for testing: Predict RBC antigen specificities expressed to aid in selecting antigen negative RBCs for transfusion if indicated. Assess risk for hemolytic disease of the fetus / newborn.
Interpretation: Predicted phenotypes are reported for each antigen based on the alleles present. Rare nucleotide changes leading to altered or partial antigen expression and null phenotypes may not be detected. The genotype for the hemoglobin S variant is reported.

*=Abnormal, #=Corrected, C=Critical, f=Result Footnote, H-High, i-Test Information, L-Low, t-Interpretive Text, @=Performing lab

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Result Footnote

f1: RBC Antigen Genotyping Interpretation

This result has been reviewed and approved by Yuan Ji, Ph.D.

Test Information

i1: RBC Antigen Genotyping Interpretation

BACKGROUND INFORMATION: Red Blood Cell Antigen Genotyping

CHARACTERISTICS: Erythrocyte alloimmunization may result in hemolytic transfusion reactions or hemolytic disease of the fetus and newborn (HDFN). Clinical presentation is variable and dependent on the specific antibody and recipient factors.
INCIDENCE: Erythrocyte alloimmunization occurs in up to 58 percent of sickle cell patients, up to 35 percent in other transfusion-dependent patients, and in approximately 0.8 percent of all pregnant women.
INHERITANCE: Typically co-dominant for red blood cell (RBC) antigens, autosomal recessive for hemoglobin S (HbS).
CAUSE: Antigen-antibody mediated red-cell hemolysis between donor/recipient or transferred maternal antibodies.
VARIANTS TESTED: See the "Additional Technical Information" document.
CLINICAL SENSITIVITY: >99 percent for c (RH4), C (RH2), e (RH5), E (RH3), k (KEL2), K (KEL1), Jka (JK1), Jkb (JK2), Fya (FY1), Fyb (FY2), M (MNS1), N (MNS2), S (MNS3), s (MNS4). Unknown for Kpa (KEL3), Kpb (KEL4), Jsa (KEL6), Jsb (KEL7), Lua (LU1), Lub (LU2), Dia (DI1), Dib (DI2), Coa (CO1), Cob (CO2), Doa (DO1), Dob (DO2), Joa (DO5), Hy (DO4), LWa (LW5), LWb (LW7), Sc1 (SC1), Sc2 (SC2), U (MNS5), V (RH10), VS (RH20), Hemoglobin S (HbS).
METHODOLOGY: Immucor PreciseType (TM) HEA Molecular BeadChip which is FDA-approved for clinical testing. Predicted phenotypes are reported for each antigen and HbS based on the variants tested.
ANALYTICAL SENSITIVITY AND SPECIFICITY: >99 percent for c (RH4), C (RH2), e (RH5), E (RH3), k (KEL2), K (KEL1), Jka (JK1), Jkb (JK2), Fya (FY1), Fyb (FY2), M (MNS1), N (MNS2), S (MNS3), s (MNS4). Unknown for Kpa (KEL3), Kpb (KEL4), Jsa (KEL6), Jsb (KEL7), Lua (LU1), Lub (LU2), Dia (DI1), Dib (DI2), Coa (CO1), Cob (CO2), Doa (DO1), Dob (DO2), Joa (DO5), Hy (DO4), LWa (LW5), LWb (LW7), Sc1 (SC1), Sc2 (SC2), U (MNS5), V (RH10), VS (RH20), Hemoglobin S (HbS).
LIMITATIONS: Only the targeted variants will be interrogated. Rare nucleotide changes leading to altered or partial antigen expression and null phenotypes may not be detected by this assay. This assay does not assess for RhD nor is it designed to diagnose sickle cell disease. Patients who have had hematopoietic stem cell transplants may have inconclusive results on this test. Abnormal signal intensities may result in indeterminate genotyping results for all tested antigens/HbS.

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i1: RBC Antigen Genotyping Interpretation

For quality assurance purposes, ARUP Laboratories will confirm the above result at no charge following delivery. Order Confirmation of Fetal Testing and include a copy of the original fetal report (or the mother's name and date of birth) with the test submission. Please contact an ARUP genetic counselor at (800) 242-2787 extension 2141 prior to specimen submission.

Counseling and informed consent are recommended for genetic testing. Consent forms are available online at https://www.aruplab.com/testing/resources/forms.

See Compliance Statement C at www.aruplab.com/cs