

Client: Example Client ABC123
123 Test Drive
Salt Lake City, UT 84108
UNITED STATES

Physician: Doctor, Example

Patient: Patient, Example

DOB: Unknown
Gender: Female
Patient Identifiers: 01234567890ABCD, 012345
Visit Number (FIN): 01234567890ABCD
Collection Date: 00/00/0000 00:00

Red Blood Cell Antigen Genotyping

ARUP test code 3001053

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-)

H=High, L=Low, *=Abnormal, C=Critical

Unless otherwise indicated, testing performed at:

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 individuals.

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.

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

H=High, L=Low, *=Abnormal, C=Critical

VERIFIED/REPORTED DATES

Procedure	Accession	Collected	Received	Verified/Reported
RBC Antigen Genotyping Specimen	23-318-102384	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Rh Antigen C/c	23-318-102384	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Rh Antigen E/e	23-318-102384	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Rh Antigen V/VS	23-318-102384	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Kell Antigen K/k	23-318-102384	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Kell Antigen Kpa/Kpb	23-318-102384	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Kell Antigen Jsa/Jsb	23-318-102384	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Duffy Antigen Fya/Fyb	23-318-102384	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Kidd Antigen Jka/Jkb	23-318-102384	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
MNS Antigen MN	23-318-102384	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
MNS Antigen S/s/U	23-318-102384	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Lutheran Antigen Lua/Lub	23-318-102384	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Diego Antigen Dia/Dib	23-318-102384	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Colton Antigen Coa/Cob	23-318-102384	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Dombrock Antigen Doa/Dob	23-318-102384	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Dombrock Antigen Hy	23-318-102384	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Dombrock Antigen Joa	23-318-102384	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Landsteiner-Wiener Antigen LWa/LWb	23-318-102384	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Scianna Antigen Sc1/Sc2	23-318-102384	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Hemoglobin S Antigen	23-318-102384	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
RBC Antigen Genotyping Interpretation	23-318-102384	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00

END OF CHART

H=High, L=Low, *=Abnormal, C=Critical

Unless otherwise indicated, testing performed at:

ARUP LABORATORIES | 800-522-2787 | aruplab.com
500 Chipeta Way, Salt Lake City, UT 84108-1221
Jonathan R. Genzen, MD, PhD, Laboratory Director

Patient: Patient, Example
ARUP Accession: 23-318-102384
Patient Identifiers: 01234567890ABCD, 012345
Visit Number (FIN): 01234567890ABCD
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