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



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 |

## RhC/c (RHCE) Antigen Genotyping, Fetal

ARUP test code 3016679

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|---|---|
| RHC GENO, Fetal Specimen | Direct Amnio |
| RhCc Genotype Fetal, Interpretation | c/c |

Indication for testing: Determine fetal RhCc genotype to assess risk for alloimmune hemolytic disease.

Fetal RhCc genotype: c/c

Interpretation: Two copies of the RHCE*4 (c) allele were detected in this prenatal sample; the RHCE*2 (C) allele was not identified. Homozygosity for the c allele predicts expression of c antigen and lack of expression of C antigen (also referred to as RhC-c+ phenotype) in this fetus. If the pregnant patient is sensitized to C antigen, this fetus is predicted to not be at risk for anti-C-mediated alloimmune hemolytic disease.

This result has been reviewed and approved by [redacted]

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

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|---|---|
| | BACKGROUND INFORMATION: RhC/c (RHCE) Antigen Genotyping, Fetal<br>CHARACTERISTICS: Erythrocyte alloimmunization may result in hemolytic transfusion reactions or hemolytic disease of the fetus and newborn (HDFN).<br>C ANTIGEN FREQUENCY: 0.68 White, 0.27 African American, 0.93 Asian.<br>c ANTIGEN FREQUENCY: 0.80 White, 0.98 African American, 0.47 Asian.<br>INHERITANCE: Co-dominant.<br>CAUSE: Antigen-antibody mediated red-cell hemolysis between donor/recipient or transferred maternal antibodies.<br>POLYMORPHISM TESTED: Rh blood group RHCE*2 (C), RHCE*4 (c): c.307C>T; p.Pro103Ser and 109bp insertion.<br>CLINICAL SENSITIVITY: 99 percent.<br>METHODOLOGY: Immucor PreciseType(TM) HEA Molecular BeadChip which is FDA-approved for clinical testing/Polymerase Chain Reaction (PCR)/Fragment Analysis.<br>ANALYTIC SENSITIVITY AND SPECIFICITY: 99 percent.<br>LIMITATIONS: Bloody amniotic fluid samples may give false-negative results because of maternal cell contamination. Rare nucleotide changes leading to altered or partial antigen expression may not be detected by this assay. Genotypes resulting in Rh null phenotypes will not be assessed. This assay is occasionally limited in predicting genotype due to extreme variation in the Rh locus. False-negative RhC or Rhc predictions may result due to RHCE-D-CE fusion genes. Patients who have had hematopoietic stem cell transplants may have inconclusive results on this test. Abnormal signal intensities may result in indeterminate genotyping results.<br><br>This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.<br><br>Counseling and informed consent are recommended for genetic testing. Consent forms are available online. |
| Maternal Contamination Study Fetal Spec | Fetal Cells<br><br>Single fetal genotype present; no maternal cells present. Fetal and maternal samples were tested using STR markers to rule out maternal cell contamination. |
| Maternal Contam Study, Maternal Spec | Whole Blood |

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

VERIFIED/REPORTED DATES

| Procedure | Accession | Collected | Received | Verified/Reported |
|---|---|---|---|---|
| RHC GENO, Fetal Specimen | 23-235-106779 | 00/00/0000 00:00 | 00/00/0000 00:00 | 00/00/0000 00:00 |
| RhCc Genotype Fetal, Interpretation | 23-235-106779 | 00/00/0000 00:00 | 00/00/0000 00:00 | 00/00/0000 00:00 |
| Maternal Contamination Study Fetal Spec | 23-235-106779 | 00/00/0000 00:00 | 00/00/0000 00:00 | 00/00/0000 00:00 |
| Maternal Contam Study, Maternal Spec | 23-235-106779 | 00/00/0000 00:00 | 00/00/0000 00:00 | 00/00/0000 00:00 |

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