# RhD Zygosity

**Versiti provides testing to determine whether an individual is homozygous or heterozygous for RhD.**

Hemolytic disease of the newborn (HDN) results from sensitization of the mother's immune system to foreign antigens present on the red cells of the fetus. Determining the RhD zygosity of the father is valuable for the management of HDN related to anti-D. Zygosity is typically predicted using Rh phenotype. However, this may not be satisfactory in all ethnic groups. Versiti has developed a robust clinical assay for RhD zygosity using molecular techniques. The assay is suitable for use in both Caucasian and African-American patients.

## Indications for testing:

- To determine whether an RhD positive individual is homozygous or heterozygous for RhD.
- To help predict the risk that a fetus will inherit RhD.

## Test method:

Quantitative fluorescent gene amplification is used to detect exons 5 and 7 of the RHD gene. Gene-specific products are quantified by capillary electrophoresis. Zygosity is determined using a ratio of RhD product to an internal control gene. The ratio of exon 5 or 7 amplicon to the internal control determines RhD copy number.

## Assay sensitivity and limitations:

This assay is appropriate for patients who are serologically RhD-positive. The assay is >99% sensitive for RhD. Rare alleles such as DBT, present in 1% of African-Americans, will not be detected by this assay.

## Reporting of results:

RhD/D Sample is homozygous for RhD.

RhD/d Sample is heterozygous for RhD.

## Specimen requirements:

3 ml EDTA (lavender top) whole blood.

SHIP

## Shipping requirements:

Place the specimen and the test requisition form into plastic bags and seal. Insert into a Styrofoam container; seal and place into a sturdy cardboard box, tape securely and ship by an overnight carrier. Ship the package in compliance with your overnight carrier guidelines. Please notify the laboratory if shipping on Friday, Saturday or the day before a holiday. (Call 800-245-3117, ext. 6250). Label with the following address:

Versiti Client Services
Immunohematology Reference Laboratory
638 N. 18th Street
Milwaukee, WI 53233
800-245-3117, ext. 6250

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ORDER

## Required forms:

Please complete all pages of the requisition form. Clinical history (including patient's ethnicity, clinical diagnosis, family history and relevant laboratory findings) is necessary for optimal interpretation of genetic test results and recommendations. Clinical and laboratory history can either be recorded on the requisition form or clinical and laboratory reports can be submitted with the sample.

## CPT Codes/Billing/Turnaround time:

**Test code:** 3874

**CPT code:** For recommended CPT codes, visit the versiti.org/test-catalog

**Turnaround time:** 3-6 days



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