RhD Zygosity

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

Hemolytic disease of the fetus and newborn (HDFN) 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 HDFN related to anti-D. Versiti has developed a robust clinical assay for RhD zygosity using molecular techniques.

Indications for testing:

- To determine whether an RhD positive individual is homozygous (express two copies) or heterozygous (express only one copy) for the *RHD* gene.
- To help predict the risk that a fetus will inherit RhD.

Test method:

Sequence-specific primer-PCR is used to detect the upstream and downstream Rhesus boxes that flank the *RHD* gene. In haplotypes with a deletion of the *RHD* gene, the fusion of the two Rhesus boxes forms a single hybrid Rhesus box that can be detected by PCR. The detection of this box is used for zygosity testing. The PCR products are evaluated by gel electrophoresis.

Assay sensitivity and limitations:

This assay is appropriate for patients who are serologically RhD-positive. The assay has a >99% sensitivity for the *RHD* gene copy number. Rare nucleotide changes leading to altered or rare RHD alleles may not be detected by this method.

Reporting of results:

Homozygous for RhD.

Heterozygous for RhD.

Specimen requirements:

3-5 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. Label with the following address:

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

versiti™

ORDER

Required forms:

Please complete all pages on the Immunohematology Reference Laboratory 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 separate reports included with the requisition.

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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