

# DAT Negative Hemolytic Anemia Evaluation

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**Hemolytic Anemia is a serious condition that can be fatal. Versiti offers serological testing to properly identify the presence of IgG molecules on the surface of the patient's red blood cell.**

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A negative Direct Antiglobulin Test (DAT) is seen in approximately 1% of patients presenting with signs and symptoms of immune hemolysis. A well-performed standard DAT detects approximately 100-500 molecules of bound IgG per red cell. Our laboratory performs a more sensitive DAT<sup>1</sup> ("super Coombs") in order to confirm a diagnosis of autoimmune hemolytic anemia in patients whose samples have tested negative in a standard DAT for any of the following reasons:

- Patient RBCs are sensitized with small numbers of IgG molecules, below the level of detection of the standard DAT.
- Low-affinity IgG autoantibodies are eluted from RBCs during routine washing of the RBCs prior to the detection phase of the standard DAT.
- IgA autoantibodies not detected by a standard DAT that is performed using monoclonal AHG.<sup>2,3</sup>

## Indications for testing:

Evaluation of patients developing hemolysis in the absence of serologic evidence to support a diagnosis of immune-mediated hemolytic anemia. Results may allow diagnosis of autoimmune hemolytic anemia, thereby assisting the physician in management of the patient.

## Test method:

Serological. Typical evaluation workup includes:

- ABO and Rh
- Direct Antiglobulin Tests, including IgA Detection
- Elutions (Routine and Enhanced)
- Antibody Detection Tests (Routine and Enhanced)

\* Some additional tests may be necessary based upon results determined by the testing lab.

## Assay sensitivity and limitations:

Negative results do not completely rule out the presence of immune-mediated hemolytic anemia. Positive test results are not absolutely diagnostic of immune hemolytic anemia and must be used in combination with clinical information to make a diagnosis.

## Specimen requirements:

Three 7 ml clot tubes (red top) and two 5 ml EDTA (lavender top) whole blood.



SHIP

## Shipping requirements:

Ship at room temperature. Insert specimens and the test requisition form into plastic bags and seal. Insert into a Styrofoam container; seal and place into a sturdy cardboard box and tape securely; ship by an overnight carrier. Ship the package in compliance with your overnight carrier guidelines. Please contact your carrier for current biohazard shipping regulations.

Label with the following address:

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





## 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:

**CPT codes:** For recommended CPT codes, visit the [versiti.org/test-catalog](https://www.versiti.org/test-catalog)

**Turnaround time:** 2 days

### References:

1. Fueger JT, Gottschall JL, Curtis BR, Johnson ST. DAT-negative immune hemolytic anemia – the role of enhanced techniques. *Transfusion* 2003;43(suppl.):103A.
2. Price WR, Johnson ST, Curtis BR. Immunoglobulin isotype identification in red cell antibodies using flow cytometry. *Transfusion* 2003;39:756-762.
3. Talano JM, Johnson ST, Friedman KD, Ilstrup SJ, Curtis BR, Scott JP, Gottschall JL. Serologic Characteristics of Three Cases of IgA Mediated Autoimmune Hemolytic Anemia (AIHA) Confirmed By Flow Cytometry. *Blood* 2002;100:283a.

### General references for immune hemolytic anemia:

- George Garratty (ed). *Immunobiology of Transfusion Medicine*. (Marcel Dekker, Inc.) 1994.
- Mark Brecher (ed). *Technical Manual*. (American Association of Blood Banks) 2002.