MAYO CLINIC LABORATORIES

Test Definition: ABTIR

Antibody Titer, Blood and Serum

Overview

Useful For

Monitoring antibody levels during pregnancy to help assess the risk of hemolytic disease of the newborn

This test is **not useful** for monitoring the efficacy of Rh-immune globulin administration.

Reflex Tests

Test Id	Reporting Name	Available Separately	Always Performed
DCTR	Direct Antiglobulin Test (Poly)	Yes	No
SPAGR	Special Red Cell Ag Typing	Yes	No
ABIDR	Antibody Identification, RBC	Yes	No
ABTIR	Antibody Titer, RBC	Yes	No
STTX25	Antibody Elution	No, (Bill Only)	No
STTX31	Antibody Adsorption	No, (Bill Only)	No
STTX32	Red Cell Antigen Typing	No, (Bill Only)	No

Additional Tests

Test Id	Reporting Name	Available Separately	Always Performed
STTX26	Antibody Panel	No, (Bill Only)	Yes

Testing Algorithm

If the antibodies detected are not clinically significant with regard to hemolytic disease of the newborn or are too weakly reactive to titer, this test will be canceled, and the antibody identification will be ordered and performed at an additional charge.

Method Name

Hemagglutination

NY State Available

Yes

Specimen

Specimen Type

Varies

Ordering Guidance

Testing is performed only on individuals who have a sex assigned at birth of female and who are pregnant or of child-bearing age to determine risk for hemolytic disease of the newborn. The test will be canceled if ordered on an individual who does not meet these criteria.

Order ATR / Isoagglutinin Titer, Anti-A, Serum or BTR / Isoagglutinin Titer, Anti-B, Serum if testing for anti-A or anti-B isoagglutinin titers is desired.

Shipping Instructions

Specimen must arrive within 72 hours of collection.

Specimen Required

Blood cells, plasma, and serum are required.
Supplies: Sarstedt Aliquot Tube, 5mL (T914)
Specimen Type: Plasma/Blood
Collection Container/Tube: 6-mL Pink top (EDTA)
Submission Container/Tube: Plastic vial
Specimen Volume:
3 mL Plasma
3 mL Red blood cells (RBCs)
Collection Instructions:
1. Centrifuge and aliquot plasma into plastic vial.
2. Label specimens as EDTA plasma or EDTA RBCs as appropriate.
3. Send both tubes.

Specimen Type: Serum/Blood
Collection Container/Tube: 10-mL Red top
Submission Container/Tube: Plastic vial
Specimen Volume:
5 mL Serum
5 mL RBCs
Collection Instructions:
1. Centrifuge and aliquot serum into a plastic vial.
2. Label specimens as serum or clotted RBCs as appropriate.
3. Send both tubes.

Specimen Minimum Volume

Blood: 6 mL EDTA
Pediatric: 2 mL Serum

Reject Due To

No specimen should be rejected.

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container

Varies	Ambient (preferred)	4 days	
	Refrigerated	4 days	

Clinical & Interpretive

Clinical Information

Some maternal IgG alloantibodies to red blood cell antigens will cross the placenta and cause hemolysis of antigen-positive fetal red blood cells. The resulting fetal anemia and hyperbilirubinemia can be harmful or possibly fatal to the newborn.

Reference Values

Negative

If positive, result will be reported as the reciprocal of the highest dilution at with macroscopic agglutination (1+) is observed.

Interpretation

The specificity of the maternal alloantibody will be stated. The titer result is the reciprocal of the highest dilution at which macroscopic agglutination (1+) is observed.

If the antibody problem identified is not relevant in hemolytic disease of the newborn or if titrations are not helpful, the titer will be canceled and will be replaced by ABIDR / Antibody Identification, Blood and Serum.

A consultation service is offered, at no charge, regarding the clinical relevance of red blood cell antibodies.

Cautions

Recent administration of Rh-immune globulin may cause anti-D to be identified and appear falsely as an alloantibody.

Clinical Reference

Cohn CS, Delaney M, Johnson ST, Katz LM, Schwartz J. eds: Technical Manual. 21st ed. AABB; 2023

Performance

Method Description

The strength and specificity of the antibody to be titered is first determined. Two-fold serial dilutions of serum are tested against antigen-positive erythrocytes. The result is the reciprocal of the highest dilution at which macroscopic agglutination (1+) is observed at the antihuman globulin phase of testing. Parallel titration of a previous specimen of the patient's serum (frozen) provides a baseline for comparison of antibody level. In the absence of a previous specimen from the patient, parallel titration of a control antiserum is used for standardization.(Cohn CS, Delaney M, Johnson ST, Katz LM, Schwartz J. eds: Technical Manual. 21st ed. AABB; 2023)

PDF Report

No

Day(s) Performed
Monday through Friday, Sunday

Report Available
1 to 2 days

Specimen Retention Time
14 days

Performing Laboratory Location
Mayo Clinic Laboratories - Rochester Main Campus

Fees & Codes

Fees
- Authorized users can sign in to Test Prices for detailed fee information.
- Clients without access to Test Prices can contact Customer Service 24 hours a day, seven days a week.
- Prospective clients should contact their account representative. For assistance, contact Customer Service.

Test Classification
This test has been cleared, approved, or is exempt by the US Food and Drug Administration and is used per manufacturer's instructions. Performance characteristics were verified by Mayo Clinic in a manner consistent with CLIA requirements.

CPT Code Information
86886
86870 (if appropriate-per panel tested)
86860 (if appropriate)
86880 x 3 (if appropriate)
86905- (if appropriate)
86978 (if appropriate)
81403 (if appropriate)-Internal only

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
ABTIR	Antibody Titer, RBC	50962-0

Result ID	Test Result Name	Result LOINC® Value
SPECR	Antibody Specificity	888-8
ALTIR	Allo Antibody Titer	In Process
CTPSR	Current Titer of Previous Specimen	In Process