MAYO CLINIC LABORATORIES

Test Definition: LAGGT

Granulocyte Antibodies, Serum

Overview

Useful For

Work-up of individuals having febrile, nonhemolytic transfusion reactions

Detection of individuals with autoimmune neutropenia

This test is **not useful for** the diagnosis of neutropenia caused by marrow suppression by drugs or tumors.

Method Name

Indirect Immunofluorescence

NY State Available

Yes

Specimen

Specimen Type

Serum Red

Specimen Required

Collection Container/Tube: Red top
Submission Container/Tube: Plastic vial
Specimen Volume: 1.5 mL
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.
Additional Information: Only pretransfusion reaction specimen is acceptable.

Specimen Minimum Volume

0.3 mL

Reject Due To

Gross hemolysis	OK
Gross lipemia	OK
Gross icterus	OK

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Serum Red	Ambient	7 days	

	Refrigerated (preferred)	30 days	
	Frozen	365 days	

Clinical & Interpretive

Clinical Information

Granulocyte antibodies are induced by pregnancy or prior transfusion and are associated with febrile, nonhemolytic transfusion reactions. Patients who have been immunized by previous transfusions, pregnancies, or allografts frequently experience febrile, nonhemolytic transfusion reactions that must be distinguished from hemolysis before further transfusions can be safely administered. Granulocyte antibodies may also be present in autoimmune neutropenia.

Reference Values

Not applicable

Interpretation

A positive result in an individual being worked up for a febrile transfusion reaction indicates the need for leukocyte-poor (filtered) red blood cells.

This test cannot distinguish between allo- and autoantibodies

Cautions

No significant cautionary statements

Clinical Reference

1. Flesch BK, Reil A. Molecular genetics of the human neutrophil antigens. Transfus Med Hemother. 2018;45(5):300-309. doi:10.1159/000491031

2. Gottschall JL, Triulzi DJ, Curtis B, et al. The frequency and specificity of human neutrophil antigen antibodies in a blood donor population. Transfusion. 2011;51(4):820-827. doi:10.1111/j.1537-2995.2010.02913.x

Performance

Method Description

Purified granulocyte preparations from normal donors are incubated with patient's test serum and then with fluorescein-tagged antihuman globulin reagent. Sera containing the antibodies deposit immunoglobulin on the target cell membrane, which is detected by the second stage antibody and visualized by fluorescence microscopy.(Verheugt FW, von dem Borne AE, Decary F, Engelfreit CP. The detection of granulocyte alloantibodies with an indirect immunofluorescence test. Br J Haematol. 1997;36(4):533-534)

PDF Report

No

Day(s) Performed

Tuesday, Wednesday, Friday

Report Available
7 to 15 days

Specimen Retention Time
7 days

Performing Laboratory Location
Rochester

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 was developed and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. It has not been cleared or approved by the US Food and Drug Administration.

CPT Code Information
86021

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
LAGGT	Granulocyte Ab, S	35279-9

Result ID	Test Result Name	Result LOINC® Value
LAGG	Granulocyte Ab, S	35279-9