
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

Container/Tube: Red top

Specimen Volume: 1.5 mL

Additional Information: Only pretransfusion reaction specimen is acceptable.

Reject Due To

Gross hemolysis OK

Gross lipemia OK

Gross icterus OK

Specimen Minimum Volume

0.3 mL

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	30 days	
	Frozen	365 days	
	Ambient	7 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 which 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 Oct;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 Apr;51(4):820-827. doi: 10.1111/j.1537-2995.2010.02913.x
3. Verheugt FW, von dem Borne AE, Decary F, Engelfreit CP: The detection of granulocyte alloantibodies with an indirect immunofluorescence test. *Br J Haematol*. 1997 Aug;36(4):533-534

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 Aug;36(4):533-534)

PDF Report

No

Performing Laboratory Location

Rochester

Fees & Codes**Test Classification**

This test was developed, and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. This test 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	Reporting Name	LOINC®
LAGG	Granulocyte Ab, S	35279-9