
Lab Dept: Serology

Test Name: RICKETTSIA ANTIBODY PANEL, IGG/IGM

General Information

Lab Order Codes: RMTS

Synonyms: Febrile Agglutinins for RMSF; RMSF; Rickettsial Antibody; Weil Felix for RMSF; Rocky Mountain Spotted Fever Antibody

CPT Codes: 86757 x2 – Antibody, Rickettsia

Test Includes: Spotted Fever Group Antibodies IgG/IgM reported as a titer.

Logistics

Test Indications: Detecting IgG and IgM class antibodies aids in the diagnosis of infection.

Species of rickettsia are small (0.3-0.5 um x 1-2 um) obligately intracellular bacteria (Proteobacteria). They have a gram-negative cell wall structure. Rickettsia are found in arthropod host for at least part of their life cycle. Rickettsial infections in the United States are caused by 2 major groups within the genus Rickettsia, spotted fever group and typhus fever group. The spotted fever group includes Rickettsia rickettsii (Rocky Mountain spotted fever), *Rickettsia akari*, *Rickettsia conorii* (Boutonneuse fever), *Rickettsia australis* (Queensland tick typhus), and *Rickettsia sibirica* (North Asian tick typhus).

Lab Testing Sections: Serology - Sendouts

Referred to: Mayo Medical Laboratories (MML Test: SFGP)

Phone Numbers: MIN Lab: 612-813-6280

STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 1 - 3 days, test set up Monday – Friday

Special Instructions: N/A

Specimen

Specimen Type: Blood

Container:	SST (Gold, marble or red)
Draw Volume:	1.5 mL (Minimum: 0.6 mL) blood
Processed Volume:	0.5 mL (Minimum: 0.2 mL) serum
	Note: Submission of the minimum volume does not allow for repeat and may result in a QNS (quantity not sufficient) result, requiring a second specimen to be collection.
Collection:	Routine blood collection
Special Processing:	Lab Staff: Centrifuge specimen, separate serum into a screw-capped round bottom plastic vial. Store and ship at refrigerated temperatures. Forward promptly.
Patient Preparation:	None
Sample Rejection:	Specimens other than serum; gross hemolysis, gross lipemia; warm specimen; mislabeled or unlabeled specimens

Interpretive

Reference Range:

Spotted Fever Group Antibody	
IgG:	<1:64
IgM:	<1:64

Critical Values: N/A

Limitations:

Antibody is variably absent for 1-2 weeks after onset of symptoms and an initial negative titer should not be used to exclude the diagnosis of rickettsial disease. A second serum specimen should be obtained 1-2 weeks later to establish the diagnosis in such patients.

IgM titers must be interpreted with caution, especially in the absence of IgG. Cases should be further evaluated clinically or serologically, by testing acute and convalescent serum in parallel to demonstrate a 4-fold or greater change in IgG or IgM titer.

Diagnosis of recent infection based on a single elevated IgG titer is complicated by the slow decline of antibody titer from past infection in many individuals. Titers may remain elevated for longer than 12 months, especially where antibiotic treatment was delayed or prior immunization was involved.

Some patients may maintain a long-term IgM titer, with or without IgG. It is important to check the IgM titer 1-2 weeks following testing of an acute specimen.

Methodology: Immunofluorescence

References: [Mayo Medical Laboratories](#) January 2018

Updates:

8/10/2004: Effective 8/3/2004, this test was changed from Rocky Mountain Spotted Fever Antibody IgG Only to the new panel test listed here to include both IgG/IgM for the Spotted Fever Group and the Typhus group. Note changes in reference range.

6/12/2012: Effective 6/6/2012, Murine typhus is no longer a part of the Rickettsial Ab Panel.

1/17/2018: Collection container update.