



**Kentucky Public Health**  
Prevent. Promote. Protect.

## Kentucky Department for Public Health Testing Guidance for Spotted Fever Rickettsiosis

The Kentucky Department for Public Health is asking all healthcare providers to ensure your patients receive confirmatory testing for Spotted Fever Rickettsiosis also known as Rocky Mountain Spotted Fever (RMSF). There were 250 confirmed and probable cases in 2017, an 33.2% increase from 2016 (167 cases were reported). Only 1 of the 250 cases in 2017 had confirmatory laboratory criteria. Your role in this effort is critical, as confirmatory testing is needed for surveillance purposes. Increased collaboration with Kentucky healthcare providers is needed to obtain the necessary confirmatory lab tests to meet the confirmed case definition and understand the true burden of SFRs.

Antibody titers can remain elevated for months or longer after the disease has resolved or can be detected in persons who were exposed previously to antigenically related organisms. For these reasons, up to 10% of the population in some areas of the United States can have elevated levels of antibodies that react with *R. rickettsii* or similar organisms. Therefore, **a single antibody titer should not be used to document or exclude a diagnosis of RMSF**. The most conclusive method is the evaluation of paired serum samples, collected 2-4 weeks apart, which reveal a four-fold or greater rise in antibody titer.

### Laboratory Confirmation Testing Includes:

- Serological evidence of a fourfold change in immunoglobulin G (IgG)-specific antibody titer reactive with *Rickettsia rickettsii* or other spotted fever group antigen by indirect immunofluorescence assay (IFA) between paired serum specimens (one taken in the first week of illness and a second 2-4 weeks later), **OR**
- Detection of *R. rickettsii* or other spotted fever group DNA in a clinical specimen via amplification of a specific target by PCR assay, **OR**
- Demonstration of spotted fever group antigen in a biopsy or autopsy specimen by IHC,  
or
- Isolation of *R. rickettsii* or other spotted fever group *Rickettsia* from a clinical specimen in cell culture.

More information can be found at:

<https://www.cdc.gov/nndss/conditions/spotted-fever-rickettsiosis/case-definition/2010/>



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The Kentucky Department for Public Health is asking all healthcare providers to ensure your patients receive confirmatory testing for Spotted Fever Rickettsiosis also known as Rocky Mountain Spotted Fever (RMSF). We have received a recent report from your facility of a patient diagnosed with RMSF, but a confirmatory test has not been performed. Your role in this effort is critical, as confirmatory testing is needed for surveillance purposes.

Antibody titers can remain elevated for months or longer after the disease has resolved or can be detected in persons who were exposed previously to antigenically related organisms. For these reasons, up to 10% of the population in some areas of the United States can have elevated levels of antibodies that react with *R. rickettsii* or similar organisms. Therefore, **a single antibody titer should not be used to document or exclude a diagnosis of RMSF.** The most conclusive method is the evaluation of paired serum samples, collected 2-4 weeks apart, which reveal a four-fold or greater rise in antibody titer.

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