Francisella tularensis IgG/IgM in Serum

Specimen Type	Serum
Specimen Volume	2.0 mL
Collection	Red top tube with no additives or serum gel tube. Allow blood to clot for 30 minutes. Centrifuge at 3000 rpm for 10 minutes. Separate serum into a transfer tube and freeze immediately.
Minimum Volume	0.5 mL
Handling	Ship frozen on dry ice.
Rejection Criteria	Grossly hemolyzed specimens. Lipemic specimens Specimens received unfrozen. Specimens outside of listed stability. Samples submitted without two unique identifiers and date of collection.
Stability	Frozen for 30 days. Refrigerated for 5 days
Methodology	IFA
Reference Range	Negative
Turnaround Time	Up to 7 business days.
Reporting of Results	Negative < 1/64 titer for IgG and IgM Positive ≥ 1/64 titer for IgG and IgM
CPT Code	86668
Clinical Significance	Tularemia is a zoonotic disease caused by the highly infectious, virulent, non-sporulating gram-negative coccobacillus *Francisells tularensis*. It is found throughout most of the northern hemisphere in a wide range of animal reservoir hosts including mammals and birds. It is not known to be transmitted from one person to another. Epidemics can often be traced to concurrent epizootics involving rodents and other small mammals. In the past, tularemia was one of the most common laboratory acquired diseases. There are several tularemia syndromes in humans, most of them depending on the portal of infection. The clinical appearance ranges from skin lesions to multi-organ involvement. The severity varies with the dose inoculated and the virulence of the bacterium, which is related to the biotype. The usual incubation period is 3 to 5 days, although it can be as long as 21 days. In most cases, antibodies appear 6 to 10 days after the onset of symptoms, i.e., usually about 2 weeks after infection, reach their peaks at 4 to 7 weeks, and, despite decreasing in level, are still present 0.5 to

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	25 years later, probably even longer.
Principle	IgG and IgM antibodies to *Francisella tularensis*, are measured semi-quanitatively in an indirect fluorescent assay (IFA). Controls and samples are incubated in the slide wells coated with *F. tularensis*, followed by a washing step to remove unbound components. The serum is screened for the presence of IgG/IgM antibodies to the antigen. If positive, the sample is re-run to determine the titer of IgG/IgM antibodies in the serum.