USEFUL FOR
Diagnosing Coxiella burnetii infection (Q fever)

CLINICAL INFORMATION
Coxiella burnetii, the causative agent of Q fever, is a small obligate intracellular bacterium, which is distributed ubiquitously in the environment. The agent is acquired through aerosol exposure and generally causes mild respiratory disease. A small number of these acute cases will advance to a chronic condition, which typically manifests as endocarditis. If left untreated, cases of Q fever endocarditis are fatal.

Current diagnostic methods of Q fever endocarditis include serologic studies and histopathologic examination of excised cardiac tissue. These current methods are subjective and nonspecific, limiting usefulness in patient diagnostics.

Evaluation of infected tissue, blood, or serum using PCR has been shown to be an effective tool for diagnosing Coxiella burnetii infection. Mayo Medical Laboratories has developed a real-time PCR test that permits rapid identification of Coxiella burnetii.

The assay targets a unique sequence of the shikimate dehydrogenase gene (aroE) present in Coxiella burnetii.

INTERPRETATION
A positive test is diagnostic of Coxiella burnetii disease.

A negative result does not negate the presence of the organism or active disease, as false-negative results may occur due to inhibition of PCR, sequence variability underlying the primers and/or probes, or the presence of Coxiella burnetii in quantities less than the limit of detection of the assay.
CLINICAL REFERENCE


