Test Definition: EHRC

Ehrlichia Chaffeensis (HME) Ab, IgG

Overview

Useful For

An adjunct in the diagnosis of ehrlichiosis

Seroepidemiological surveys of the prevalence of the infection in certain populations

Testing Algorithm

See Acute Tick-Borne Disease Testing Algorithm in Special Instructions.

Special Instructions

- Acute Tick-Borne Disease Testing Algorithm

Method Name

Immunofluorescence Assay (IFA)

NY State Available

Yes

Specimen

Specimen Type

Serum

Specimen Required

Container/Tube:

Preferred: Serum gel

Acceptable: Red top

Specimen Volume:0.5 mL

Forms

If not ordering electronically, complete, print, and send a Microbiology Test Request (T244) with the specimen.

Specimen Minimum Volume

0.15 mL

Reject Due To

Gross hemolysis	Reject
Gross lipemia	Reject
Gross icterus	Reject
Heat-inactivated specimen	Reject

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

Clinical and Interpretive

Clinical Information

Ehrlichia chaffeensis is an intracellular rickettsia-like bacterium that preferentially infects monocytes and is sequestered in parasitophorous vacuoles referred to as morulae. Infections with *E chaffeensis* are also referred to as human monocytotropic ehrlichiosis (HME). *E chaffeensis* is transmitted by *Amblyomma* species ticks, which are found throughout the southeastern and south central United States.

Many cases of HME are subclinical or mild, however, the infection can be severe and life-threatening, particularly in immunosuppressed individuals. Reported mortality rates range from 2% to 3%. Fever, fatigue, malaise, headache, and other "flu-like" symptoms occur most commonly. Leukopenia, thrombocytopenia, and elevated hepatic transaminases are frequent laboratory findings.

Reference Values

<1:64

Reference values apply to all ages.

Interpretation

A positive immunofluorescence assay (titer > or =1:64) suggests current or previous infection. In general, the higher the titer, the more likely the patient has an active infection. Four-fold rises in titer also indicate active infection.

Previous episodes of ehrlichiosis may produce a positive serology although antibody levels decline significantly during the year following infection.

Cautions

Serology for IgG may be negative during the acute phase of infection (<7 days postsymptom onset), during which time detection using targeted nucleic acid amplification testing (eg, polymerase chain reaction: PCR) is recommended.

Detectable IgG-class antibodies typically appear within 7 to 10 days postsymptom onset.

IgG-class antibodies may remain detectable for months to years following prior infection. Therefore, a single time point-positive titer needs to be interpreted alongside other findings to differentiate recent versus past infection.

Other members of the *Ehrlichia* genus (eg, *Ehrlichia ewingii*) may not be detected by this assay.

Clinical Reference

Centers for Disease Control and Prevention (CDC), Division of Vector-Borne Diseases: Tickborne diseases of the United States: A Reference manual for health care providers. 4th ed. CDC; 2017

Performance

Method Description

Immunofluorescence assay technique using antigen substrate slides consisting of a cell culture infected with *Ehrlichia chaffeenis*.(Dawson JE, Fishbein DB, Eng TR, et al: Diagnosis of human ehrlichiosis with the indirect fluorescent antibody test: kinetics and specificity. J Infect Dis. 1990;162:91-95; package insert: Ehrlichia chaffeensis IFA IgG. DiaSorin Molecular; 8/12/2016)

PDF Report

No

Day(s) and Time(s) Test Performed

Monday through Friday; 9 a.m.

Analytic Time

Same day/1 day

Maximum Laboratory Time

3 days

Specimen Retention Time

14 days

Performing Laboratory Location

Rochester

Fees and Codes

Fees

- Authorized users can sign in to Test Prices for detailed fee information.
- Clients without access to Test Prices can contact Customer Service 24 hours a day, seven days a week.
- Prospective clients should contact their Regional Manager. For assistance, contact Customer Service.

Test Classification

This test was developed using an analyte specific reagent. Its performance characteristics were determined by Mayo Clinic in a manner consistent with CLIA requirements. This test has not been cleared or approved by the U.S. Food and Drug Administration.

CPT Code Information

86666

LOINC® Information

Test ID	Test Order Name	Order LOINC Value
EHRC	Ehrlichia Chaffeensis (HME) Ab, IgG	47405-6

Result ID	Test Result Name	Result LOINC Value
81478	Ehrlichia Chaffeensis (HME) Ab, IgG	47405-6