MAYO CLINIC LABORATORIES

Test Definition: CHIKI

Chikungunya Interpretation

Overview

Useful For

Interpretation of testing that aids in the diagnosis of recent infection with Chikungunya virus in patients with recent travel to endemic areas and a compatible clinical syndrome

Method Name

Only orderable as part of a profile. For more information see CHIKV / Chikungunya IgM and IgG, Antibody, Serum.

Technical Interpretation

NY State Available

Yes

Specimen

Specimen Type

Serum

Reject Due To

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	30 days	
	Frozen	30 days	

Clinical & Interpretive

Clinical Information

Chikungunya virus (ChikV) is a single-stranded RNA alphavirus and a member of the Togaviridae family of viruses. The name Chikungunya is derived from the language of the Makonde ethnic groups in southeast Africa and means "that which bends" or "stooped walk." This is in reference to the hunched-over appearance of infected individuals due to the characteristically painful and incapacitating arthralgia caused by the virus. ChikV is endemic throughout Africa, India, and, more recently, the Caribbean islands. In 2014, the first case of autochthonous, or local transmission, in the United States occurred in Florida.

Humans are the primary reservoir for ChikV and *Aedes* species mosquitos are the primary vectors for transmission. Unlike other mosquito-borne viruses, such as West Nile virus and Dengue, the majority of individuals who are exposed

to ChikV become symptomatic, with the most severe manifestations observed at the extremes of age and in those with suppressed immunity. Once exposed to ChikV, individuals develop lasting immunity and protection from reinfection.

Prior to development of symptoms, the incubation period ranges, on average, from 3 to 7 days. Infected patients typically present with sudden-onset high fever, incapacitating joint pain, and often a maculopapular rash lasting anywhere from 3 to 10 days. Notably, symptom relapse can occur in some individuals 2 to 3 months following resolution of initial symptoms. Currently, there are no licensed vaccines and treatment is strictly supportive care.

Reference Values

Only orderable as part of a profile. For more information see CHIKV / Chikungunya IgM and IgG, Antibody, Serum.

An interpretive report will be provided.

Interpretation

IgM and IgG Negative:
-No serologic evidence of exposure to Chikungunya virus. Repeat testing on a new specimen collected in 5 to 10 days is recommended if clinical suspicion persists.

IgM and IgG Positive:
-IgM and IgG antibodies to Chikungunya virus detected, suggesting recent or past infection. Correlate with exposure history and clinical presentation. Confirmatory testing at a public health lab is suggested. IgM antibodies to Chikungunya virus may remain detectable for 3 to 4 months post-infection.

IgM Positive, IgG Negative:
-IgM antibodies to Chikungunya virus detected, suggesting recent infection. Correlate with exposure history and clinical presentation. Confirmatory testing at a public health lab is suggested. Repeat testing in 5 to 10 days is recommended to demonstrate anti-Chikungunya virus IgG seroconversion to confirm current infection.

IgM Negative, IgG Positive:
-IgG antibodies to Chikungunya virus detected, suggesting past infection.

IgM and/or IgG Borderline:
-Repeat testing in 10 to 14 days is recommended.

Cautions

Specimens collected too early following infection may be negative for antibodies to Chikungunya virus. Testing of convalescent serum is recommended.

Chikungunya and Dengue viruses currently co-circulate in endemic areas and infections can present similarly in symptomatic patients. It is therefore recommended to evaluate at-risk patients for infection with both viruses.

Clinical Reference

Lwande OW, Obanda V, Bucht G, et al. Global emergence of Alphaviruses that cause arthritis in humans. Infect Ecol Epidemiol. 2015;5:29853. doi:10.3402/iee.v5.29853

Performance

Method Description
Automated interpretation of IgM and IgG antibody results for Chikungunya virus.

PDF Report
No

Day(s) Performed
Bimonthly on the second and forth Wednesday

Report Available
Same day/1 to 14 days

Performing Laboratory Location
Mayo Clinic Laboratories - Rochester Superior Drive

Fees & 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 account representative. For assistance, contact Customer Service.

Test Classification
Not Applicable

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
CHIKI	Chikungunya Interpretation	69048-7

Result ID	Test Result Name	Result LOINC® Value
CHIKI	Chikungunya Interpretation	69048-7