

Quick Guide to Interpretation of Zika Test Results in New York City (NYC)

Refer to this table for assistance with interpretation of specimens collected after July 1, 2016.[‡]

Providers can call the NYC Provider Access Line at **1-866-692-3641** to discuss Zika testing and for assistance interpreting Zika test results.



Result	Interpretation	Next Steps
Zika RNA Nucleic Acid Amplification Testing (NAAT)*		
DETECTED or POSITIVE	Evidence of recent Zika virus infection.	No additional testing required. Results are confirmatory for Zika virus infection.
NOT DETECTED or NEGATIVE	No evidence of recent infection with Zika virus. Serological testing may be warranted.	Additional testing (IgM serology) required: <ul style="list-style-type: none"> Serology is available commercially. Information on commercial laboratories that conduct serologic testing is available under the Testing for Zika/Commercial Laboratories section of the Zika Virus: Information for Providers webpage. Serology is especially critical for pregnant patients to determine Zika virus infection status. Contact the laboratory where the NAAT* specimen was submitted to determine if serologic testing can be done without requiring an additional specimen. Specimens sent to the NYC Public Health Laboratory will have serology performed routinely; no additional specimen needed.
INCONCLUSIVE or INVALID	Results were inconclusive for the presence of Zika virus RNA. This may occur if the specimen was inadequate or contains inhibitors.	If serology testing not already ordered, submit a new specimen for serology testing.
EQUIVOCAL	Zika virus infection could not be definitively ruled out, however viral load may be close to the limit of detection.	If serology testing not already ordered, submit a new specimen for serology testing.
Serology (Zika IgM ELISA) – Zika IgM is thought to persist for up to 12 weeks following infection. Therefore, IgM serology may not capture Zika infections in persons infected more than 12 weeks before specimen collection.		
PRESUMPTIVE or POSSIBLE POSITIVE or EQUIVOCAL	This screening test result suggests recent exposure to a flavivirus, but cannot determine which flavivirus. [†] This test is not specific for Zika virus. Please wait for the final confirmatory testing result (PRNT) before making any definitive healthcare decisions	Additional testing required: Commercial labs are required to automatically forward presumptive positive, possible positive, and equivocal specimens to the New York State Wadsworth Center (WC) laboratory. Sera received at WC will be tested by a plaque-reduction neutralization test (PRNT). WC test results will be reported back to you by the commercial laboratory. <ul style="list-style-type: none"> PRNT may help (1) determine the flavivirus to which the patient was exposed (however, if the patient also had a previous flavivirus infection, it may be impossible to determine if the patient was recently infected with Zika virus versus another flavivirus) or (2) rule out a false positive Zika IgM ELISA result.
INCONCLUSIVE	It is not possible to interpret the result of this test because of high background signal.	Additional testing required: Collect another specimen for serologic testing 3 weeks from initial specimen collection date and submit for testing.
NEGATIVE	No serologic evidence of recent flavivirus infection if: <ul style="list-style-type: none"> Asymptomatic patient whose specimen was collected more than 3 weeks but less than 12 weeks after last potential exposure (e.g., unprotected sex, time spent in a Zika- affected area) or; Symptomatic patient whose specimen was collected 8 or more days but less than 12 weeks after the onset of illness. See IMPORTANT NOTE under Next Steps	Additional testing required for: (1) Asymptomatic patient - if specimen collected less than 3 weeks after last potential exposure (e.g., unprotected sex, time spent in a Zika-affected area) or, (2) Symptomatic patient - if specimen collected less than 8 days after illness onset. <ul style="list-style-type: none"> In the scenarios listed above, the specimen may have been collected before the patient mounted a detectable immune response. Submit a follow-up specimen collected 3 weeks after initial specimen. Otherwise, if specimen was collected between 3 and 12 weeks after last potential exposure or between 8 days and 12 weeks after symptom onset, results suggest no serological evidence of recent Zika virus infection. NOTE: Test results should be interpreted in the context of the patient history, signs and symptoms into account. IMPORTANT NOTE: The expected duration of Zika IgM antibodies in serum is 12 weeks following infection but in a small proportion of persons with a previous dengue or other flavivirus infection, there may be a muted IgM response (i.e., duration of antibodies is shorter and/or the titers diminished). For pregnant women with negative IgM but whose fetus or infant has microcephaly or other concerning abnormality, please call the NYC Health Department at 866-692-3641 to discuss the case and to pursue additional testing.

* Nucleic acid amplification testing (NAAT) includes real time reverse transcriptase-polymerase chain reaction (rRT-PCR), and transcription-mediated amplification (TMA) testing.

† Flaviviruses include but are not limited to dengue, West Nile and yellow fever viruses.

‡ Before July 1, the testing algorithm included the Arbovirus Microsphere Immunofluorescence Assay (MIA), a test no longer routinely conducted on specimens submitted to NYC PHL.