
Lab Dept: Serology

Test Name: ARBOVIRUS & WEST NILE ANTIBODY PANEL,
BLOOD

General Information

Lab Order Codes: AWINB

Synonyms: Encephalitis Antibody; Arbovirus Antibody; Encephalitis LaCrosse/California IgM Antibody; Encephalitis Eastern Equine IgM Antibody; Encephalitis St. Louis Equine IgM Antibody; Encephalitis Western Equine IgM Antibody, Encephalitis LaCrosse/California IgG Antibody; Encephalitis Eastern Equine IgG Antibody; Encephalitis St. Louis Equine IgG Antibody; Encephalitis Western Equine IgG Antibody; West Nile Virus; WNV Ab

CPT Codes: 86651 x2 – Antibody; encephalitis, California
86652 x2 – Antibody; encephalitis, Eastern equine
86653 x2 – Antibody; encephalitis, St. Louis equine
86654 x2 – Antibody; encephalitis, Western equine
86788 – West Nile virus antibody, IgM
86789 – West Nile virus antibody, IgG

Test Includes: IgM and IgG antibody determinations for 4 different encephalitis strains and for IgG and IgM West Nile virus.

Logistics

Test Indications: Useful for detecting antibodies to Eastern equine encephalitis virus, LaCrosse/California encephalitis virus, St. Louis equine encephalitis virus, and Western equine encephalitis, aiding a diagnosis arboviral encephalitis. Detecting antibodies to West Nile.

Lab Testing Sections: Serology - Sendouts

Referred to: Mayo Medical Laboratories (Test: 87814/AWNS)

Phone Numbers: MIN Lab: 612-813-6280
STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 1 – 4 days, test set up Monday - Friday

Special Instructions: N/A

Specimen

Specimen Type:	Whole blood
Container:	Red top tube
Draw Volume:	2.5 mL (Minimum: 1.8 mL) blood
Processed Volume:	0.8 mL (Minimum: 0.5 mL) serum
Collection:	Routine venipuncture
Special Processing:	Lab Staff: Centrifuge specimen, remove serum aliquot specimen into a screw-capped, sterile vial. Store and ship at refrigerated temperatures. Forward promptly.
Patient Preparation:	None
Sample Rejection:	Specimens other than serum; gross hemolysis, grossly lipemic; mislabeled or unlabeled specimens

Interpretive**Reference Range:**

Reference ranges apply to all ages.	
California (LaCrosse) Encephalitis Antibody	
IgG:	<1:10
IgM:	<1:10
Eastern Equine Encephalitis Antibody	
IgG:	<1:10
IgM:	<1:10
St. Louis Encephalitis Antibody	
IgG:	<1:10
IgM:	<1:10
Western Equine Encephalitis	
IgG:	<1:10

IgM:	<1:10
West Nile Antibody	
IgG:	Negative
IgM:	Negative

Critical Values: N/A

Limitations: **Arbovirus Ab:** All results must be correlated with clinical history and other data available to the attending physician.

Specimens drawn within the first 2 weeks after onset are variably negative for IgG antibody and should not be used to exclude the diagnosis of arboviral disease. If arboviral infection is suspected, a second specimen should be obtained and tested 10-21 days later.

Since cross-reactivity with dengue fever virus does occur with St. Louis encephalitis antigens, and, therefore, cannot be differentiated further. The specific virus responsible for such a titer may be deduced by the travel history of the patient, along with available medical and epidemiological data, unless the virus can be isolated.

Eastern equine encephalitis and Western equine encephalitis viruses show some cross-reactivity; however, antibody response to the infecting virus is typically at least 8-fold higher.

West Nile Ab: Test results should be used in conjunction with a clinical evaluation and other available diagnostic procedures. The significance of negative test results in immunosuppressed patients is uncertain. Positive test results may not be valid in persons who have received blood transfusions or other blood products within the past several months.

False-negative results due to competition by high levels of IgG, while theoretically possible, have not been observed.

False-positive results may occur with persons vaccinated for flaviviruses (e.g., yellow fever, Japanese encephalitis, dengue), with persons infected with other flaviviruses, and with persons previously infected with West Nile Virus. Because closely related arboviruses exhibit serologic cross-reactivity, it sometimes may be epidemiologically important to attempt to pinpoint the infecting virus by conducting cross-neutralization tests using an appropriate battery of closely related viruses.

Methodology: Arbovirus Ab: Immunofluorescence Assay (IFA)
West Nile Ab: Enzyme-Linked Immunosorbent Assay (ELISA)

References: [Mayo Medical Laboratories Web Page](#) June 2013

