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**Lab Dept:** Serology

**Test Name:** ARBOVIRUS & WEST NILE ANTIBODY PANEL,  
CSF

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***General Information***

**Lab Order Codes:** AWNC

**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  
86778 - West Nile Virus, IgM  
86779 - West Nile Virus, IgG

**Test Includes:** IgM and IgG antibody determinations for 4 different encephalitis strains and West Nile Virus in spinal fluid.

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***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 or West Nile Virus.

**Lab Testing Sections:** Serology - Sendouts

**Referred to:** Mayo Medical Laboratories (MML Test: 87813/AWNC)

**Phone Numbers:** MIN Lab: 612-813-6280

STP Lab: 651-220-6550

**Test Availability:** Daily, 24 hours

**Turnaround Time:** 1-4 days, performed Monday - Friday

**Special Instructions:** When this test is ordered, it is recommended that both blood and spinal fluid be collected. See [Arbovirus & West Nile Ab, Blood](#) for blood collection and other test information.

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**Specimen**

<b>Specimen Type:</b>	CSF
<b>Container:</b>	CSF conical tube
<b>Draw Volume:</b>	0.8 mL (Minimum: 0.6 mL) spinal fluid
<b>Collection:</b>	Routine CSF collection
<b>Special Processing:</b>	Lab Staff: Aliquot 0.75 mL spinal fluid into a sterile, screw-capped, round bottom, plastic vial. Store and ship at refrigerated temperatures.
<b>Patient Preparation:</b>	None
<b>Sample Rejection:</b>	Room temperature specimens; mislabeled or unlabeled specimens; gross hemolysis; gross lipemia

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**Interpretive****Reference Range:**

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

IgG:	Negative
IgM:	Negative

**Critical Values:**

N/A

**Limitations:**

**Arbovirus Ab, CSF:** All results must be correlated with clinical history and other data available to the attending physician. False-positive results may be caused by breakdown of blood-brain barrier, or by the introduction of blood into the CSF collection. 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 positive results 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 responses to the infecting virus is typically at least 8-fold higher.

**West Nile Virus Ab, CSF:** 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. False-negative results due to competition by high levels of IgG, while theoretically possible, have not been observed. WNV antibody results for CSF should be interpreted with caution. Complicating factors include low antibody levels found in CSF, passive transfer of antibody from blood, and contamination via bloody taps.

**Methodology:**

Arbovirus, CSF: Immunofluorescence Assay (IFA)  
West Nile Virus, CSF: Enzyme-Linked Immunosorbent Assay (ELISA)

**References:**

[Mayo Medical Laboratories](#) June 2013