Reporting Title: Encephalitis Antibody Panel (CSF)
Performing Location: Focus Diagnositics, Inc.

Specimen Requirements:

Submit 5 mL of spinal fluid (CSF). Refrigerate specimen after collecting and ship at refrigerate temperature in a sterile, plastic screw-cap vial.

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	14 days
	Frozen	30 days

Result Codes:

Result ID	Reporting Name	Type	Unit	LOINC®
Z2856	LCM IgG	Alphanumeric		In Process
Z2857	LCM IgM	Alphanumeric		In Process
Z2858	Interpretation	Alphanumeric		In Process
Z2859	Measles (Rubeola) IgG, IFA	Alphanumeric		In Process
Z2860	Measles (Rubeola) IgM, IFA	Alphanumeric		In Process
Z2861	Interpretation	Alphanumeric		In Process
Z2862	Mumps Ab IgG, IFA	Alphanumeric		In Process
Z2863	Mumps Ab IgM, IFA	Alphanumeric		In Process
Z2864	Interpretation	Alphanumeric		In Process
Z2865	VZV Total Ab (ACIF)	Alphanumeric		In Process
Z2866	VZV IgM (IFA)	Alphanumeric		In Process
Z2867	Interpretation	Alphanumeric		In Process
Z3239	West Nile Ab IgG, CSF	Alphanumeric		In Process
Z3240	West Nile Ab IgM, CSF	Alphanumeric		In Process
Z2871	HSV 1 IgG Index	Alphanumeric		In Process
Z2872	HSV 2 IgG Index	Alphanumeric		In Process
Z2873	HSV 1 IgM Screen	Alphanumeric		In Process
Z2874	HSV 2 IgM Screen	Alphanumeric		In Process

Components:

Test ID	Reporting Name	CPT Units	CPT Code	Always Performed	Orderable Separately
Billing only	HERPES SIMPLEX TEST	1	86695		
Billing only	HERPES SIMPLEX TYPE 2	1	86696		
Billing only	LYMPH CHORIOMENINGITIS AB	2	86727		
Billing only	WEST NILE VIRUS ANTIBODY	1	86789		
Billing only	HERPES SIMPLEX TYPE 2	1	86696		
Billing only	WEST NILE VIRUS AB IGM	1	86788		
Billing only	RUBEOLA ANTIBODY	2	86765		
Billing only	HERPES SIMPLEX TEST	1	86695		
Billing only	MUMPS ANTIBODY	2	86735		
Billing only	VARICELLA-ZOSTER ANTIBODY	2	86787		
FLCAC	LCM Virus Ab, IFA CSF	2	86727	Yes	No
FMGMC	Measles (Rubeola) G/M Ab, IFA CSF	2	86765	Yes	No
FMABP	Mumps Antibody Panel, IFA (CSF)	2	86735	Yes	No
FVZTC	Varicella-Zoster, Total/IgM Ab, CSF	2	86787	Yes	No
FWNAB	West Nile Virus Ab (IgG, IgM), CSF		Profile	Yes	No
FHSGC	HSV 1/2 (IgG) Type-Specific Ab, CSF		Profile	Yes	No
FHSMC	Herpes Simplex Virus 1/2 IgM Ab,CSF		Profile	Yes	No

Reflex Tests:

Test ID	Reporting Name	CPT Units	CPT Code	Always Performed	Orderable Separately
FMTR1	HSV 1 IgM Titer		Profile	No	No
FMTR2	HSV 2 IgM Titer	1	86696	No	No

Result Codes for Reflex Tests:

Test ID	Result ID	Reporting Name	Type	Unit	LOINC®
FMTR1	Z2957	HSV 1 IgM Titer	Alphanumeric		In Process
FMTR2	Z2958	HSV 2 IgM Titer	Alphanumeric		In Process

Reference Values:

Encephalitis Antibody Panel (CSF)

Lymphocytic Choriomeningitis (LCM) Virus Ab, IFA (CSF)

Reference Range: IgG <1:1
IgM <1:1

Diagnosis of infections of the central nervous system can be accomplished by demonstrating the presence of intrathecally-produced specific antibody. However, interpreting results is complicated by low antibody levels found in CSF, passive transfer of antibody from blood and contamination via bloody taps.

This assay was developed and its performance characteristics determined by Focus Diagnostics. It has not been cleared or approved by the U.S. Food and Drug Administration. The FDA has determined that such clearance or approval is not necessary. Performance characteristics refer to the analytical performance of the test.

Measles (Rubeola) IgG and IgM Antibody Panel (CSF)

Reference Range: IgG <1:64
IgM <1:1

Diagnosis of infections of the central nervous system can be accomplished by demonstrating the presence of intrathecally-produced specific antibody. Interpreting results may be complicated by low antibody levels found in CSF, passive transfer of antibody from blood and contamination via bloody taps. The interpretation of CSF results must consider CSF-serum antibody ratios to the infectious agent.

This assay was developed and its performance characteristics determined by Focus Diagnostics. It has not been cleared or approved by the U.S. Food and Drug Administration. The FDA has determined that such clearance or approval is not necessary. Performance characteristics refer to the analytical performance of the test.

Mumps Antibody Panel, IFA (CSF)

Reference Range: IgG <1:8
IgM <1:1

Diagnosis of infections of the central nervous system can be accomplished by demonstrating the presence of intrathecally-produced specific antibody. Interpretation of results may be complicated by low antibody levels found in CSF, passive transfer of antibody from blood and contamination via bloody taps. The interpretation of CSF results must consider CSF-serum antibody ratios to the infectious agent.

This assay was developed and its performance characteristics determined by Focus Diagnostics. It has not been cleared or approved by the U.S. Food and Drug Administration. The FDA has determined that such clearance or approval is not necessary. Performance characteristics refer to the analytical performance of the test.

Varicella-Zoster Virus (VZV) Antibody (Total, IgM), ACIF/IFA, CSF
Reference Ranges: VZV Total AB <1:2
VZV IgM <1:1

Diagnosis of infections of the central nervous system can be accomplished by demonstrating the presence of intrathecally-produced specific antibody. Interpreting results may be complicated by low antibody levels found in CSF, passive transfer of antibody from blood and contamination via bloody taps. The interpretation of CSF results must consider CSF-serum antibody ratios to the infectious agent.

This assay was developed and its performance characteristics determined by Focus Diagnostics. It has not been cleared or approved by the U.S. Food and Drug Administration. The FDA has determined that such clearance or approval is not necessary. Performance characteristics refer to the analytical performance of the test.

West Nile Virus Antibodies (IgG, IgM), CSF
Reference Range: IgG <1.30
IgM <0.90

Interpretive Criteria:

IgG:	<1.30	Antibody not detected
	1.30 - 1.49	Equivocal
	>=1.50	Antibody detected
IgM:	<0.90	Antibody not detected
	0.90 - 1.10	Equivocal
	>1.10	Antibody detected

West Nile Virus (WNV) IgM is usually detectable in CSF from WNV-infected patients with encephalitis or meningitis at the time of clinical presentation. Because IgM antibody does not readily cross the blood-brain barrier, IgM antibody in CSF strongly suggests acute central nervous system infection. WNV antibody results from CSF should be interpreted with caution. Possible complicating factors include low levels of antibody found in CSF, passive transfer of antibodies from blood and contamination via bloody spinal taps. Antibodies induced by other flavivirus infections (e.g. Dengue virus, St. Louis encephalitis virus) may show cross-reactivity with WNV.

Herpes Simplex Virus 1/2 (IgG) Type Specific Antibodies, CSF
Reference Range: < or = 1.00

Interpretive Criteria:

< or = 1.00	Antibody not detected
> 1.00	Antibody detected

Detection of HSV type-specific IgG in CSF may indicate central nervous system (CNS) infection by that HSV type. However, interpretation of results may be complicated by a number of factors, including low antibody levels found in CSF, passive transfer of antibody across the blood-brain barrier, and serum contamination of CSF during CSF collection. PCR detection of type-specific HSV DNA in CSF is the preferred method for identifying HSV CNS infections.

Herpes Simplex Virus 1/2 Antibody (IgM), IFA with Reflex to Titer, CSF
Reference Range: Negative

The IFA procedure for measuring IgM antibodies to HSV 1 and HSV 2 detects both type-common and type-specific HSV antibodies. Thus, IgM reactivity to both HSV 1 and HSV 2 may represent crossreactive HSV antibodies rather than exposure to both HSV 1 and HSV 2.

Diagnosis of central nervous system infections can be accomplished by demonstrating the presence of intrathecally-produced specific antibody. Interpreting results may be complicated by low antibody levels found in CSF, passive transfer of antibody from blood and contamination via bloody taps. The interpretation of CSF results must consider CSF-serum antibody ratios to the infectious agent.

This test was developed and its characteristics have been determined by Focus Diagnostics. Performance characteristics refer to the analytical performance of the test.

Test Performed by: Focus Diagnostics, Inc.
5785 Corporate Avenue
Cypress, CA 90630-4750