Test Definition: CMUMP

Mumps Virus Antibodies, IgG and IgM, Spinal Fluid

Overview

Useful For
Aiding in the diagnosis of central nervous system infection by mumps virus

Method Name
Immunofluorescence

NY State Available
No

Specimen

Specimen Type
CSF

Specimen Required
Container/Tube: Sterile vial
Specimen Volume: 0.5 mL
Collection Instructions: Submit aliquot from collection vial 1.

Forms
If not ordering electronically, complete, print, and send Infectious Disease Serology Test Request (T916) with the specimen.

Specimen Minimum Volume
0.1 mL

Reject Due To

Gross hemolysis	OK
Gross lipemia	OK

Specimen Stability Information

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

Clinical & Interpretive

Clinical Information

Mumps virus, together with parainfluenza virus types 1-4, respiratory syncytial virus and measles virus are classified in the family Paramyxoviridae. Mumps is an acute infection, which causes the painful enlargement of the salivary glands in approximately 70% to 90% of children (4 to 15 years of age) who develop clinical disease. In 5% to 20% post pubertal individuals, testicular pain (orchitis) and abdominal pain (oophoritis in females) can occur. Other complications include pancreatitis (less than 5% of cases) and central nervous system disease (meningitis/encephalitis) that occur rarely (about 1 in 6000 cases of mumps). Widespread routine immunization of infants with attenuated mumps virus has changed the epidemiology of this virus infection. Since 1989, there has been a steady decline in reported mumps cases, from 5712 to 352 cases in 1999, the lowest total ever reported. There is only one serotype of mumps virus that infects humans. Mumps has been recognized since antiquity by virtue of the parotitis that is often a striking clinical feature of the disease. Generally, a mild childhood illness, the varied presentation of mumps reflects the widespread invasion of visceral organs and central nervous system that commonly follows infection with mumps virus.

Reference Values

IgG: <1:5
IgM: <1:10
Reference values apply to all ages.

Interpretation

Detection of organism-specific antibodies in the cerebrospinal fluid (CSF) may suggest central nervous system infection. However, these results are unable to distinguish between intrathecal antibodies and serum antibodies introduced into the CSF at the time of lumbar puncture or from a breakdown in the blood-brain barrier. The results should be interpreted with other laboratory and clinical data prior to a diagnosis of central nervous system infection.

Cautions

No significant cautionary statements

Clinical Reference

Litman N, Baum SG. Mumps virus. In: Bennett JE, Dolin R, Blaser MJ, eds. Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases. 9th ed. Elsevier; 2020:2087-2092

Performance

Method Description

Cerebrospinal fluid (CSF) from a patient is reacted with the antigen substrate. Antibodies, if present, will bind to the antigen forming stable antigen-antibody complexes. If no antibodies are present, the complexes will not be formed, and CSF components will be washed away. Fluorescein labeled antihuman IgG or IgM antibody is added to the reaction site which binds with the complexes formed. This results in a positive reaction of bright apple-green fluorescence when viewed with a properly equipped fluorescence microscope. If no complexes are formed, the fluorescein labeled antibody

will be washed away, exhibiting a negative result.(Package insert: Mumps Virus Antigen Substrate Slide. AESKU.BION; 09/2019)

PDF Report
No

Day(s) Performed
Monday through Friday

Report Available
Same day/1 to 3 days

Specimen Retention Time
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
This test was developed and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. It has not been cleared or approved by the US Food and Drug Administration.

CPT Code Information
86735 x 2

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
CMUMP	Mumps Virus Ab, IgG and IgM, CSF	88458-5

Result ID	Test Result Name	Result LOINC® Value
1414	Mumps Virus Ab, IgG	21401-5
1415	Mumps Virus Ab, IgM	21402-3