Test Definition: MMPM

Mumps Ab, IgM, S

Overview

Useful For

Laboratory diagnosis of mumps virus infection

Method Name

EnzymeImmunoassay(EIA)

NY State Available

Yes

Specimen

Specimen Type

Serum

Specimen Required

Container/Tube:

Preferred: Serum gel

Acceptable: Red top

Specimen Volume:1 mL

Forms

If not ordering electronically, complete, print, and send a Microbiology Test Request (T244) with the specimen.

Specimen Minimum Volume

0.5 mL

Reject Due To

Gross hemolysis	Reject
Gross lipemia	Reject
Heat-inactivated specimen	Reject

Specimen Stability Information

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

Clinical and Interpretive

Clinical Information

Mumps virus, parainfluenza types 1 through 4, respiratory syncytial virus, and measles virus are classified in the family Paramyxovirdae. Mumps is an acute infection that causes the painful enlargement of the salivary glands in approximately 70% to 90% of children (4-15 years of age) who develop clinical disease.(1) In 5% to 20% of postpubertal individuals, testicular pain (orchitis in males) and abdominal pain (oophoritis in females) can occur. Other complications include pancreatitis (<5% of cases) and central nervous system disease (meningitis/encephalitis), which occur rarely (about 1 in 6,000 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, with an average of 265 cases each year since 2001. However, a recent outbreak of mumps in 2006 reemphasized that this virus continues to persist in the population, and laboratory testing may be needed in clinically compatible situations.

The laboratory diagnosis of mumps is typically accomplished by detection of antibody to mumps virus. However, due to the limitations of serology (eg, inadequate sensitivity and specificity), additional laboratory testing including virus isolation or detection of viral nucleic acid by polymerase chain reaction in throat, saliva, or urine specimens should be considered in clinically compatible situations.

Reference Values

Negative

Index value 0.00-0.79=negative

Reference values apply to all ages.

Interpretation

Positive:

Presence of IgM-class antibodies to mumps virus may support a clinical diagnosis of recent or acute phase infection with this virus.

Negative:

Absence of IgM-class antibodies to mumps virus suggests lack of acute phase infection with mumps virus. However, serology may be negative in early disease, and results should be interpreted in the context of clinical findings.

Cautions

Results must always be interpreted together with other clinical and laboratory findings.

Serum specimens drawn during the acute phase of infection may be negative by serological tests.

All positive results must be interpreted with care, as some false-positive results or heterotypical responses of the IgM have been seen in the serum of pregnant women or in patients with an acute infection caused by cytomegalovirus, herpes simplex virus, measles, rubella, and parvovirus.

Supportive Data

SeraQuest mumps IgM test kit showed a sensitivity of 97.3% and a specificity of 96.6% when 160 specimens were tested in parallel with a reference method.

Clinical Reference

1. Hodinka RL, Moshal KL: Childhood infections. In: Storch GA, ed. Essentials of Diagnostic Virology. Churchill Livingstone; 2000:168-178

2. Harmsen T, Jongerius MC, van der Zwan CW, Plantinga AD, Kraaijeveld CA, Berbers GA: Comparison of a neutralization enzyme immunoassay and an enzyme-linked immunosorbent assay for evaluation of immune status of children vaccinated for mumps. J Clin Microbiol. 1992 Aug;30(8):2139-2144

Performance

Method Description

This mumps IgM assay uses an enzyme capture method. Diluted samples are incubated in wells coated with antihuman-IgM monoclonal antibodies. If present, IgM antibodies are captured in the wells. The wells are washed to remove excess sample. A conjugate-antigen complex is added and the wells are incubated. IgM antibodies specific for the antigen will bind the conjugate. The wells are washed to remove excess conjugate. Peroxidase substrate is added and the wells are incubated. A stop solution is added, converting the substrate to a yellow end product, which is then read photometrically.(Package insert: Mumps IgM. Quest International; version 6/2017)

PDF Report

No

Day(s) and Time(s) Test Performed

Monday through Friday; 4 p.m.

Analytic Time

Same day/1 day

Maximum Laboratory Time

4 days

Specimen Retention Time

14 days

Performing Laboratory Location

Rochester

Fees and 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 Regional Manager. For assistance, contact Customer Service.

Test Classification

This test has been cleared, approved or is exempt by the U.S. Food and Drug Administration and is used per manufacturer's instructions. Performance characteristics were verified by Mayo Clinic in a manner consistent with CLIA requirements.

CPT Code Information

86735

LOINC® Information

Test Definition: MMPM

Mumps Ab, IgM, S

Test ID	Test Order Name	Order LOINC Value
MMPM	Mumps Ab, IgM, S	6478-2

Result ID	Test Result Name	Result LOINC Value
MUMP1	Mumps Ab, IgM, S	6478-2
DEXM	Index Value	25419-3