Test Definition: MYCOM

M. pneumoniae Ab, IgM, S

Overview

Useful For

Screen for recent or past exposure to *Mycoplasma pneumoniae*

Reflex Tests

Test ID	Reporting Name	Available Separately	Always Performed
MMYCO	M. pneumoniae Ab, IgM, S by IFA	No	No

Method Name

Only orderable as part of a profile. For more information see MYCO / *Mycoplasma pneumoniae* Antibodies, IgG and IgM, Serum.

Enzyme Immunoassay (EIA)

NY State Available

Yes

Specimen

Specimen Type

Serum

Specimen Required

Only orderable as part of a profile. For more information see MYCO / *Mycoplasma pneumoniae* Antibodies, IgG and IgM, Serum.

Collection Container/Tube:

Preferred: Serum gel

Acceptable: Red top

Submission Container/Tube: Plastic vial

Specimen Volume:1 mL

Specimen Minimum Volume

0.5 mL

Reject Due To

Hemolysis	Mild reject; Gross reject
Lipemia	Mild reject; Gross reject
Icterus	NA

Other	NA

Specimen Stability Information

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

Clinical and Interpretive

Clinical Information

Mycoplasma pneumoniae is an important respiratory tract pathogen. Several syndromes have been associated with the infection including pharyngitis, tracheobronchitis, pneumonia, and inflammation of the tympanic membrane presenting as bullous myringitis.

M pneumoniae accounts for approximately 20% of all cases of pneumonia. Classically, it causes a disease that has been described as primary atypical pneumonia. The disease is of insidious onset with fever, headache, and malaise for 2 to 4 days before the onset of respiratory symptoms. Most cases do not require hospitalization. Symptomatic infections attributable to this organism most commonly occur in children and young adults (ages 2-19 years).

Reference Values

Only orderable as part of a profile. For more information see MYCO / *Mycoplasma pneumoniae* Antibodies, IgG and IgM, Serum.

Negative

Interpretation

Positive IgM results are consistent with recent infection, although false-positives may occur (see Cautions).

Negative results do not rule out the presence of acute or ongoing *Mycoplasma pneumoniae*-associated disease. The specimen may have been drawn before the appearance of detectable antibodies. If testing is performed too early following primary infection, IgM may not be detectable. If a *Mycoplasma* infection is clinically suspected, a second, convalescent specimen should be submitted in 14 to 21 days.

Cautions

A diagnosis of *Mycoplasma pneumoniae* infection should not be solely based on results of serologic testing for this agent. Test results should be interpreted in conjunction with the clinical evaluation and the results of other diagnostic procedures (eg molecular detection).

The use of hemolytic, lipemic, bacterially contaminated, or heat-inactivated specimens should be avoided as erroneous results may occur.

Assay performance characteristics have not been established for matrices other than serum.

The continued presence or absence of antibodies cannot be used to determine the success or failure of therapy.

Testing should not be performed as a screening procedure for the general population. Testing should only be done when clinical evidence suggests the diagnosis of *M pneumoniae*-associated disease.

The performance of this test has not been established on neonates and immunocompromised patients.

Performance of the IgM assay has not been tested with specimens known to be positive for antibodies to organisms that are known to be associated with lower respiratory illness (ie, influenza A and B, cytomegalovirus, *Chlamydophila pneumoniae*, parainfluenza), and closely related serovars known to cross-react with *M pneumoniae*, such as *M genitalium*, and *M hominis*, as well as various *Ureaplasma* species. Cross-reactivity studies with such organisms have not been performed with this assay.

The IgG removal system included with the IgM test system has been shown to functionally remove the IgG from specimens containing total IgG levels ranging from 300 to 600 mg/mL. The effectiveness of this removal system at IgG levels exceeding 600 mg/mL has not been established.

The prevalence of *Mycoplasma* IgM antibody is relatively low, which affects the assay's predictive value.

Clinical Reference

Smith T: *Mycoplasma pneumoniae* infections: diagnosis based on immunofluorescence titer of IgG and IgM antibodies. Mayo Clin Proc 1986;61:830-831

Performance

Method Description

IgM EIA:

Test sera are diluted with the sample diluent provided. The sample diluent contains antihuman IgG that precipitates and removes IgG and rheumatoid factor from the sample, leaving IgM free to react with immobilized antigen. Diluted sera are incubated in antigen-coated microwells. Any antigen-specific antibody in the samples will bind to the immobilized antigen. The plate is washed to remove unbound antibody and other serum components. Peroxidase conjugated goat-antihuman IgM (chain specific) is added to the wells and incubated. The conjugate will react with the IgM antibody/antigen on the solid phase. The wells are washed to remove unbound conjugate. The microwells containing immobilized conjugate are incubated with peroxidase substrate solution. Hydrolysis of the substrate by peroxidase produces a color change. After a period of time the reaction is stopped by the addition of diluted acid, and the color changes are measured photometrically. The color intensity of the solution depends on the antibody concentration in the serum sample.(Package insert: *Mycoplasma* IgM ELISA II. Wampole Laboratories, Princeton, NJ 2004)

IgM Immunofluorescence Assay (IFA):

Mycoplasma pneumoniae antigenic substrate is fixed onto microscope slide wells. Serum that has been pretreated to remove IgG antibodies is incubated with the substrate. If IgM antibody to *Mycoplasma pneumoniae* is present, it will bind to the substrate. Fluorescein-labeled antihuman IgM conjugate is added to the slide well(s) and the slide is incubated. If antibody is present, it can be observed as a characteristic positive, bright, apple-green fluorescent reaction when the slide is read on a fluorescence microscope.(Package insert: *Mycoplasma pneumoniae* IgM IFA Antibody Test System. Zeus Scientific, Inc., Raritan, NJ 2004)

PDF Report

No

Day(s) and Time(s) Test Performed

Monday through Friday; 9 a.m.

Analytic Time

Same day/1 day

Maximum Laboratory Time

3 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 modified from the manufacturer's instructions. Its performance characteristics were determined by Mayo Clinic in a manner consistent with CLIA requirements. This test has not been cleared or approved by the U.S. Food and Drug Administration.

CPT Code Information

86738

LOINC® Information

Test ID	Test Order Name	Order LOINC Value
MYCOM	M. pneumoniae Ab, IgM, S	5257-1

Result ID	Test Result Name	Result LOINC Value
MYCOM	M. pneumoniae Ab, IgM, S	5257-1