Cambridge Biomedical

Mycoplasma pneumoniae IgA Antibodies in Serum

Specimen Type	Serum
Specimen Volume	1.0 mL
Collection	Red top tube with no additives or serum gel tube. Allow sample to clot for 30 minutes. Centrifuge at 3000 rpm for 10 minutes and pour serum into a transfer tube. Freeze immediately.
Minimum Volume	0.6 mL
Handling	Ship frozen on dry ice.
Rejection Criteria	• Specimens received unfrozen. • Specimens outside of listed stability.
Stability	Frozen for 120 days.
Methodology	ELISA
Reference Range	None Detected < 10 BU/mL
Turnaround Time	Up to 7 business days.
CPT Code	86738
Clinical Significance	Mycoplasma pneumoniae is a bacterium lacking a cell wall. This organism is widely distributed and causes primary atypical pneumonia, often called 'walking pneumonia.' M. pneumonia can be cultured on artificial media but may take 21-30 days for growth to appear. Both M. pneumoniae IgA antibodies may be used for a rapid and specific identification of this disease.
Principle	This procedure uses a direct ELISA technology. A Mycoplasma pneumoniae (*M.pn*) species-specific antigen is used to coat a microplate. An *M.pn* IgA standard, *M.pn* IgA controls, and patient sera are applied to the plate. Anti *M.pn* antibodies from the samples bind to the immobilized antigen. An HRP (horse radish peroxidase)-labeled secondary antibody that specifically recognizes human IgA is applied. The amount of labeled secondary antibody that becomes bound to the plate is then quantified by addition of HRP substrate, TMB (3,3',5,5'-tetramethylbenzidine). TMB is oxidized by HRP and a color change from clear to blue occurs. An acidic solution is added to stop the reaction. The resulting yellow color is then read on an ELISA reader and a standard curve is generated to calculate patient results.