Anti-M. pneumoniae

Reliable IgA, IgG and IgM antibody determination

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The new language of life

Infections with *M. pneumoniae*
Bronchitis, laryngitis and more

Pathogen

Mycoplasma pneumoniae is a pathogen causing atypical community-acquired pneumonia. The bacteria can also induce bronchitis and laryngitis as well as a variety of other extrapulmonary manifestations.

Epidemiology

Humans are the only known reservoir for *Mycoplasma pneumoniae*, which is widespread worldwide. The seroprevalence in the population is high due to its high contagiousness. Primary infections often occur in children and adolescents.

Transmission

Mycoplasma pneumoniae is transmitted aerogen through droplets or saliva. Transmission through smear infection is also possible.

Clinical Symptoms

A *Mycoplasma pneumoniae* infection initially appears as pharyngitis or tracheabronchitis with mild symptoms. The infection is usually self-limiting. Reinfections are possible. About 10% of the infected – particular children and elderly - develop atypical pneumonia with a dry cough. In addition, *M. pneumoniae* infections are associated with other clinical manifestations such as meningitis, encephalitis, Guillain-Barré syndrome, arthritis, vasculitis, thrombosis, hepatitis, glomerulonephritis, myocarditis and pericarditis.

Diagnosis

The diagnosis of *M. pneumoniae* infections is based on the clinical symptoms and confirmed by laboratory analyses. Various direct and indirect methods are available for laboratory diagnostic confirmation. IgM, IgG and IgA antibodies are usually produced during primary infections. Whereas IgM antibodies are generally no longer detectable a few weeks after primary infection, IgG antibodies usually remain much longer and confirm contact with the pathogen. In general, reinfections lead to a rapid increase in IgA and IgG antibody activities.

Anti-Mycoplasma pneumoniae
Reliable antibody determination

Antigen

The Alegria Anti-Mycoplasma pneumoniae IgA, IgG and IgM Abs. Monotests are based on a preparation of *Mycoplasma pneumoniae* enriched with recombinant adhesin P1 for a reliable determination of IgA, IgG and IgM antibodies.

Calibration

The Alegria Anti-Mycoplasma pneumoniae IgA, IgG and IgM Abs. Monotests are calibrated using internal reference samples. Results are expressed in U/mL.

Sensitivity and Specificity

	Sensitivity	Specificity	Diagnostic Efficiency
Anti-Mycoplasma pneumoniae IgA	> 99 %	97.2 %	97.3 %
Anti-Mycoplasma pneumoniae IgG	> 99 %	95.3 %	96.9 %
Anti-Mycoplasma pneumoniae IgM Abs.	96.6 %	98.3 %	98.1 %

Precision Anti-Mycoplasma pneumoniae IgA

	Intraassay Repeatability		Interassay Reproducibility	
	Antibody Activity (U/mL)	Coeffcient of Variation (CV)	Antibody Activity (U/mL)	Coeffcient of Variation (CV)
Sample 1	11.9 U/mL	3.5 %	13.0 U/mL	7.8 %
Sample 2	25.1 U/mL	4.4 %	25.0 U/mL	6.3 %
Sample 3	109.0 U/mL	3.8 %	110.1 U/mL	3.3 %

Precision Anti-Mycoplasma pneumoniae IgG

	Intraassay Repeatability		Interassay Reproducibility	
	Antibody Activity (U/mL)	Coeffcient of Variation (CV)	Antibody Activity (U/mL)	Coeffcient of Variation (CV)
Sample 1	11.1 U/mL	9.2 %	12.7 U/mL	7.9 %
Sample 2	21.8 U/mL	9.2 %	23.7 U/mL	3.4 %
Sample 3	111.4 U/mL	8.6 %	103.4 U/mL	9.0 %

Product Highlights

- ELISA-based random access determination of IgA, IgG and IgM antibodies against *Mycoplasma pneumoniae*
- Full automation and complete traceability with Alegria 2
- Lab-on-a-Strip: ready-to-use test-specific reagents in individually sealed and barcoded Alegria Monotest strips
- Reliable determination of antibodies against a *Mycoplasma pneumoniae* preparation enriched with recombinant adhesin P1
- Integrated Rf-absorption prior to IgM detection
- Excellent diagnostic efficiency
- High reproducibility for reliable test results
- Economical all-in-one Alegria Monotests, particularly suited for small series
- Flexible combination of Alegria Monotests for optimal workflow efficiency

Ordering *information*

- Anti-Mycoplasma pneumoniae IgA .....**ORG 915A**
- Anti-Mycoplasma pneumoniae IgG .....**ORG 915G**
- Anti-Mycoplasma pneumoniae IgM Abs. ...**ORG 915MX**

Scan here **for more information** about Alegria Anti-Mycoplasma pneumoniae Monotests

Literature

Hu, J. *et al.* (2023) Insight into the Pathogenic Mechanism of Mycoplasma pneumoniae. Curr. Microbiol. *80*, 14.

Bajantri, B. *et al.* (2018) Mycoplasma pneumoniae: A Potentially Severe Infection. J. Clin. Med. Res. *10*, 535.

Atkinson, T.P. *et al.* (2008) Epidemiology, clinical manifestations, pathogenesis and laboratory detection of Mycoplasma pneumoniae infections. FEMS Microbiol. Rev. *32*, 956 - 73.

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ORGENTEC Diagnostika GmbH |
Carl-Zeiss-Straße 49-51 | 55129 Mainz | Deutschland |
Tel. : +49 6131 / 9258-0 | Fax : +49 6131 / 9258-58 | E-mail: orgentec@orgentec.com | **www.orgentec.com**