Anti-Chlamydia MIF (IgA, IgG, IgM)

- Parallel determination of antibodies against C. trachomatis, C. pneumoniae and C. psittaci
- Clear reduction of cross reactivity by inactivation of the shared lipopolysaccharide (LPS) antigen
- Simplified focusing for cell-based substrates compared to yolk sac matrix

**Technical data**

<table>
<thead>
<tr>
<th>Antigen substrate</th>
<th>Elementary bodies of C. trachomatis, C. pneumoniae and C. psittaci</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample material</td>
<td>Serum or plasma</td>
</tr>
<tr>
<td>Sample dilution</td>
<td>Qualitative: 1:10 (IgA, IgM), 1:100 (IgG); semiquantitative: from 1:10/100/1000 etc.</td>
</tr>
<tr>
<td>Test procedure</td>
<td>IgA, IgG: 30 min (sample) / 30 min (conjugate), room temperature</td>
</tr>
<tr>
<td>Microscopy</td>
<td>Objective: 20x</td>
</tr>
<tr>
<td>Reagents</td>
<td>Ready for use, with the exception of the PBS-Tween buffer (for dilutions and washing steps)</td>
</tr>
<tr>
<td>Stability</td>
<td>18 months from the date of manufacture when stored at +2°C to +8°C</td>
</tr>
<tr>
<td>Test kit format</td>
<td>10 slides, each containing 5 or 10 test fields; kits include all necessary reagents (for RF absorption EUROSORB is also required, order no. ZF 1270-0145)</td>
</tr>
<tr>
<td>Order no.</td>
<td>FI 2191-1005-3 A, G or M (example for a test kit including 10 slides with 5 fields each)</td>
</tr>
<tr>
<td>Related products</td>
<td>FR 2191-####-3 A, G or M: Anti-Chlamydia MIF EUROPattern (IgA, IgG, IgM)</td>
</tr>
</tbody>
</table>

**Clinical significance**

The infectious agents Chlamydia trachomatis, C. psittaci and C. pneumoniae belong to the human pathogenic Chlamydia genus. They are among the smallest intracellular gram-negative bacteria.

In humans, C. trachomatis can cause infections of the eyes (serovars A–C) and the urogenital tract (serovars D–K, L1–L3). Infections with the C. trachomatis serovars D–K often proceed asymptptomatically. If symptoms develop they are urethritis, epididymitis and prostatitis in men, and urethritis, cervicitis and salpingitis/adnexitis in women. Chronic infections of the inner female genital organs lead in many cases to sterility. Secondary infertility in men has also been shown. After a urogenital infection with C. trachomatis, sequelae such as reactive arthritis may develop.

C. pneumoniae is transmitted by aerosols and causes infections of the upper respiratory tract. Most infections proceed asymptptomatically. A large proportion of adults have had an infection with C. pneumoniae and are seropositive to the pathogen. Reinfections may occur.

C. psittaci can be found in large quantities in the secretions and excrements of infected birds where it remains alive for long periods. The inhalation of infected dust leads to the zoonanthroponoses ornithosis or psittacosis (parrot fever) in humans. In addition to flu-like symptoms, life-threatening pneumonia can develop during the course of the infection, which is often accompanied by further organ manifestations.

**Diagnostic application**

The EUROIMMUN Anti-Chlamydia MIF (micro-immunofluorescence assay), based on purified elementary bodies of the species C. trachomatis, C. pneumoniae and C. psittaci as the antigen, supports the diagnosis of Chlamydia infections. By inactivation of the lipopolysaccharide (LPS) antigen, cross reactions within the Chlamydia species and to other bacteria are minimised, so that species-specific antibody detection is possible. In addition, a fourth BIOCHIP with non-infected cells allows reliable differentiation between unspecific and specific fluorescence.
The EUROIMMUN Anti-Chlamydia MIF is available in two formats: slides with 5 or 10 fields. One test field contains four BIOCHIPS.

Reference range

Titer 1: <10 (IgA, IgM) or titer 1 : <100 (IgG)

Prevalence, sensitivity and specificity

<table>
<thead>
<tr>
<th>Antigen substrate</th>
<th>Ig class</th>
<th>n</th>
<th>Panel</th>
<th>Prevalence (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C. trachomatis</td>
<td>IgA</td>
<td>200</td>
<td>Healthy blood donors</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>IgG</td>
<td>200</td>
<td>Healthy blood donors</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>IgM</td>
<td>200</td>
<td>Healthy blood donors</td>
<td>4</td>
</tr>
<tr>
<td>C. pneumoniae</td>
<td>IgA</td>
<td>212</td>
<td>Antibody positive samples</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>IgG</td>
<td>216</td>
<td>Antibody positive samples</td>
<td>63</td>
</tr>
<tr>
<td></td>
<td>IgM</td>
<td>200</td>
<td>Healthy blood donors</td>
<td>1</td>
</tr>
<tr>
<td>C. psittaci</td>
<td>IgA</td>
<td>200</td>
<td>Healthy blood donors</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>IgG</td>
<td>200</td>
<td>Healthy blood donors</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>IgM</td>
<td>200</td>
<td>Healthy blood donors</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Antigen substrate</th>
<th>Ig class</th>
<th>Commercial Anti-Chlamydia MIF</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Specitivity (%)</td>
</tr>
<tr>
<td>C. trachomatis</td>
<td>IgA</td>
<td>121</td>
</tr>
<tr>
<td></td>
<td>IgG</td>
<td>124</td>
</tr>
<tr>
<td></td>
<td>IgM</td>
<td>204</td>
</tr>
<tr>
<td>C. pneumoniae</td>
<td>IgG</td>
<td>122</td>
</tr>
<tr>
<td></td>
<td>IgM</td>
<td>204</td>
</tr>
<tr>
<td>C. psittaci</td>
<td>IgA</td>
<td>130</td>
</tr>
<tr>
<td></td>
<td>IgG</td>
<td>128</td>
</tr>
<tr>
<td></td>
<td>IgM</td>
<td>204</td>
</tr>
</tbody>
</table>

*with respect to isolated positive samples in the MIF reference test

Analytical specificity

The outer membranes of all three Chlamydia species are very similar. By inactivation of the LPS (lipopolysaccharide), cross reactions are significantly reduced but not excluded.

Literature

1. AWMF S2k Leitlinie (2016). Infections with Chlamydia trachomatis.
5. CDC. Sexually Transmitted Diseases Treatment Guidelines. MMWR Vol.64 No.3 (2015).