ACPA assays by ORGENTEC – for diagnosis of early rheumatoid arthritis

Anti-MCV® – ORG 548, ORG 248
Anti-CCP hs (high sensitive)® – ORG 601, ORG 301

The discovery of Anti-Citrullinated Protein/Peptide Antibodies (ACPA) and the biology of citrullination have led to important advantages in the understanding of the pathophysiology and the development of rheumatoid arthritis (RA). As a result of our intense research about ACPA we brought two powerful test systems to market: Anti-MCV® and Anti-CCP hs (high sensitive)®. Both tests are based on the natural target autoantigen, mutated citrullinated vimentin (MCV).

**Anti-MCV® by ORGENTEC**

Autoantibodies against mutated citrullinated vimentin (MCV) are highly specific and extremely sensitive markers for rheumatoid arthritis. MCV antibodies are an indicator of advanced injury to the joints and aggressive progression of the disease. In contrast to the detection of antibodies against synthetic cyclic citrullinated peptides used in common filaggrin-based anti-CCP assays, changes in the anti-MCV concentration correspond to changes of clinical parameters. As well as allowing for an unambiguous diagnosis, Anti-MCV® by ORGENTEC thus also makes it possible to monitor therapeutic progress.

**Anti-CCP hs (high sensitive)® by ORGENTEC**

Conventional anti-CCP assays make use of cyclic synthetic filaggrin-derivatized peptides for detection of RA-specific autoantibodies, using only a very few epitopes. In contrast to that ORGENTEC’s Anti-CCP hs (high sensitive)® presents numerous selected specific optimized epitopes chosen from the natural autoantigen mutated citrullinated vimentin (MCV). As it has been proved, this tailored vimentin-based antigen profile reflects the actual physiological situation, leading to enhanced autoantibody recognition and highest sensitivity of Anti-CCP hs (high sensitive)® by ORGENTEC.
ACPA tests by ORGENTEC – the advantages:

- Alegria® Test Strips for automated individual autoantibody detection
- ELISA tests, also ideally suited for automated ELISA platforms
- accurate ACPA tests (ACR criteria!) for early RA diagnosis
- Anti-MCV® – detects autoantibodies against epitopes of native MCV protein
- Anti-CCP hs (high sensitive)® – cyclic MCV peptides, tailored antigen profile for enhanced autoantibody recognition!
- numerous epitopes for highest sensitivity

<table>
<thead>
<tr>
<th></th>
<th>Rheumatoid Factor</th>
<th>Anti-CCP (competitor’s assays)</th>
<th>ORGENTEC’s Anti-MCV®</th>
<th>ORGENTEC’s Anti-CCP hs (high sensitive)®</th>
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</thead>
<tbody>
<tr>
<td>sensitivity</td>
<td>60%</td>
<td>70% – 78%</td>
<td>82%</td>
<td>92%</td>
</tr>
<tr>
<td>association with extra-articular manifestation</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
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<tr>
<td>correlation with outcome, prognosis for erosive progression</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>correlation with disease activity</td>
<td>limited (IgA)</td>
<td>–</td>
<td>+</td>
<td>object of research</td>
</tr>
<tr>
<td>correlation with response to treatment</td>
<td>limited (IgM)</td>
<td>–</td>
<td>+</td>
<td>object of research</td>
</tr>
<tr>
<td>correlation with cardiovascular symptoms</td>
<td>–</td>
<td>–</td>
<td>+</td>
<td>object of research</td>
</tr>
</tbody>
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Alegria® Test Strips:
- Anti-MCV®: 24 Alegria® Test Strips | ORG 248
- Anti-CCP hs (high sensitive)®: 24 Alegria® Test Strips | ORG 301

ELISA test systems:
- Anti-MCV®: 12 x 8 determinations | ORG 548
- Anti-CCP hs (high sensitive)®: 12 x 8 determinations | ORG 601

References: