A unique diagnostic solution for functional assessment of the complement system

- Simple and accurate ELISA kits
- All three pathways
- Lectin pathway with both MBL and Ficolin-3
Understand the full picture

With the Euro Diagnostica complement assay solution complete picture of the complement function is provided
The increased awareness and interest in the complement system has augmented the need for a simple and objective method to assess the function of complement activity. Euro Diagnostica, working closely with key opinion leaders, has developed an assay solution which allows you to assess the function of respective pathway of the complement system in a simple, objective ELISA format. The properties of the solution make it well-suited as an analytical tool for a range of disorders related to complement deficiency.

One test for all three pathways and Ficolin-3—separately or together
The Euro Diagnostica complement ELISA solution is unique as it allows for a complete assessment of all three pathways simultaneously and with no interference, saving time and effort in securing an accurate diagnosis. To further strengthen the analytical potential of the lectin pathway, the assay solution includes a test for the functional assessment of the Ficolin-3 triggered pathway, available for research use only. This enables both detection of Ficolin-3 deficiency and determination of mutated and dysfunctional MASP2.

Simple to use and interpret
The Euro Diagnostica complement system assay is purposely designed for ease of use and maximum accuracy. Results are easy to interpret (Table), and being in an ELISA format the assay can be used with a wide variety of open systems.

Methodology
The Euro Diagnostica complement system assay combines principles of the functional hemolytic assay for complement activation with ease of use and objective ELISA format employing antibodies specific for a neoepitope expressed by the formation of the MAC as a result of complement activation.

The wells of the microtitre strips are coated with specific activators of the classical, or the lectin (MBL or Ficolin-3), or the alternative pathway.

Patient serum is diluted in diluent containing specific blocker to ensure that only the respective pathway is activated. During the incubation of the patient serum, complement is activated by the specific coating. Finally, the neoepitope formed by C5b-9 is detected. The amount of the neoepitope generated is proportional to the functional activity of the particular complement pathway.

The assay for the functional assessment of the classical pathway (COMPL CP310) has been redesigned to further optimize objective quantification. A separate calibration curve is now included in the assay procedure.

A valuable diagnostic tool in a number of clinical situations
Deficiencies of complement components are generally associated with an increased susceptibility to a wide range of infections. The complement system has been suspected to be involved in the development or progression of a number of autoimmune diseases. In recent years, a number of other diseases and clinical situations including therapy, where the immune system is compromised, have been suggested to be affected by complement activity. Examples from the literature are:

<table>
<thead>
<tr>
<th>Classical Pathway</th>
<th>Lectin Pathway (MBL)</th>
<th>Lectin Pathway (Ficolin-3)</th>
<th>Alternative Pathway</th>
<th>Possible deficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>Positive</td>
<td>Positive</td>
<td>Positive</td>
<td>None</td>
</tr>
<tr>
<td>Negative</td>
<td>Positive</td>
<td>Positive</td>
<td>Positive</td>
<td>C1q, C1r, C1s</td>
</tr>
<tr>
<td>Positive</td>
<td>Positive</td>
<td>Negative</td>
<td>Negative</td>
<td>Properdin, Factor BLD</td>
</tr>
<tr>
<td>Positive</td>
<td>Negative</td>
<td>Positive</td>
<td>Positive</td>
<td>MBL</td>
</tr>
<tr>
<td>Positive</td>
<td>Positive</td>
<td>Negative</td>
<td>Positive</td>
<td>Ficolin 3</td>
</tr>
<tr>
<td>Positive</td>
<td>Negative</td>
<td>Negative</td>
<td>Positive</td>
<td>MASP2</td>
</tr>
<tr>
<td>Negative</td>
<td>Negative</td>
<td>Negative</td>
<td>Negative</td>
<td>C3, C5, C6, C7, C8, C9</td>
</tr>
<tr>
<td>Negative</td>
<td>Negative</td>
<td>Negative</td>
<td>Positive</td>
<td>C4, C2 or combination</td>
</tr>
</tbody>
</table>

Table
In the Euro Diagnostica complement assay system, assessment of the Ficolin-3 Pathway (RUO) will add information regarding MASP2 functionality as shown in the table.
**Principle of Euro Diagnostica diagnostic solution for functional complement assessment**

**Classical Pathway**
- C1q

**Lectin Pathway**
- MBL
- Ficolin-3

**Alternative Pathway**
- C3b/Factor B

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**Bibliography**


**Illustration**

The complement system is composed of at least 30 proteins present in the circulation or different body fluids. The activity of complement is in the form of a cascade with highly-regulated chemical steps through three separate pathways, each activated by different target molecules.

All three pathways lead to the activation of C3, and thereafter all three pathways share complement cascade components.

The Euro Diagnostica complement assay solution allows diagnosis of all three pathways together or individually, providing accurate answers quickly and enabling suitable intervention.
Euro Diagnostica
Answers to you

Euro Diagnostica is a full service diagnostic solutions company. We produce top quality assay kits for disease assessments, so clinicians can make qualified decisions about treatment. With so much at stake, our focus is on getting the correct diagnosis every time.

We’re rigorous about the quality of our kits, and develop our assays in collaboration with scientific experts in the field. The unique Euro Diagnostica complement ELISA solution is just one example of our ongoing commitment to continuous research and development of new assessment possibilities for improving patient care.

Product info

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
<th>Plate Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMPL 3001</td>
<td>ELISA Kit for total functional assessment of the Complement System</td>
<td>96 wells break-apart</td>
</tr>
<tr>
<td>COMPL CP3101</td>
<td>ELISA Kit for total functional assessment of the Classical Pathway</td>
<td>96 wells break-apart</td>
</tr>
<tr>
<td>COMPL MP3201</td>
<td>LLtA Kit for total functional assessment of the Lectin Pathway (Mitsubishi)</td>
<td>96 wells break-apart</td>
</tr>
<tr>
<td>COMPL AP3301</td>
<td>LLtA Kit for total functional assessment of the Alternative Pathway</td>
<td>96 wells break-apart</td>
</tr>
<tr>
<td>COMPL F3</td>
<td>ELISA Kit for total functional assessment of the Lectin Pathway (r-colin-3)</td>
<td>96 wells break-apart</td>
</tr>
</tbody>
</table>

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2. For research use only, contact your local representative for research use availability in your country.

Euro Diagnostica AB

Mail address: P.O. Box 50117
SE - 202 11 Malmö, Sweden

Visiting address: Lundavägen 151
Malmö, Sweden

T +46 40 53 76 00
F +46 40 43 22 88
E info@eurodiagnostica.com
W www.eurodiagnostica.com

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Visit our website www.eurodiagnostica.com