MBL Oligomer ELISA Kit
(KIT 029)

For human serum or plasma

MBL
- a key test in the assessment of primary immunodeficiency
Mannan-binding lectin (MBL)

– a key test in the assessment of primary immunodeficiency

Mannan-binding lectin (MBL) is an important component of the innate immune system. However, in at least 12% of the average Caucasian population, the circulating level of functional MBL is insufficient. This makes MBL deficiency by far the most common primary immunodeficiency. While the consequences of MBL deficiency can be quite subtle, several studies have shown that MBL deficiency increases susceptibility to infectious diseases and predisposes to greater severity when infections occur. This correlation has not only led to an increase in the routine diagnostic use of MBL measurement, but has also pointed to a need for therapeutic applications of MBL.

Clinical significance

Deficiency of MBL has been shown to increase the overall susceptibility to infectious diseases and to predispose to greater disease severity; hence especially early and aggressive treatment with antibiotics can be required in risk patients such as those on cancer chemotherapy or immunosuppressant treatment.

MBL is a key test parameter in:

Patients with a suspected primary immunodeficiency
- Children with recurrent infections
- Adults with recurrent, severe & persistent infections

Immunosuppressed patients
- Cancer chemotherapy
- Transplantation

Patients with cystic fibrosis

Patients with autoimmune diseases
- Systemic lupus erythematosus
- Rheumatoid arthritis

Women with recurrent spontaneous abortions

MBL in complement activation

The complement system is a set of blood proteins that form a proteolytic enzyme cascade to help clear pathogens from the body. MBL binds specifically to microbial surface carbohydrates and activates the complement system by means of the MASP-dependent lectin pathway, the MASPs being proteolytic enzyme precursors bound to MBL. This leads to the phagocytosis or lysis of pathogenic microorganisms, including bacteria, viruses, protozoa and fungi.

Only the normally oligomerized forms of MBL are functional, i.e. capable of binding efficiently to microbial carbohydrates and associating with the MASPs.
MBL Oligomer ELISA Kit

Key features

The MBL Oligomer ELISA Kit employs a monoclonal antibody sandwich which is highly specific for normally oligomerized MBL molecules. Hence the results obtained with the MBL Oligomer ELISA Kit (KIT 029) correspond to the circulating levels of “functional” MBL.

The MBL Oligomer ELISA Kit (KIT 029) is used in research all over the world and for routine diagnostic purposes in several countries.

- Measures oligomerized “functional” MBL
- Measures in plasma and serum
- All reagents are ready-to-use
- Storage at 2-8°C
- For in-vitro diagnostic (IVD) use*
- Can be used in many different automated ELISA workstations

Assay procedure

1. MBL antibody

   Plates are precoated with the primary MBL antibody and are ready to use.

2. MBL

   Diluted serum or calibrators are added to each well and incubated.

3. Biotinylated MBL antibody

   Biotinylated monoclonal detection antibody is added to each well and incubated.

4. Streptavidin - HRP

   HRP-conjugated streptavidin is added to each well and incubated.

5. Substrate (TMB)

   Substrate is added to each well and developed for 15 minutes.

Quantitative results are obtained by measuring the absorbance reading at 450 nm.

Total assay time less than 4 hours

Kit components

<table>
<thead>
<tr>
<th>Item</th>
<th>Contents</th>
<th>Quantity</th>
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<tbody>
<tr>
<td>☐</td>
<td>12 x 8 coated Microwells + Frame</td>
<td>96 wells</td>
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<tr>
<td>☐</td>
<td>Sample Diluent</td>
<td>1 x 60 mL</td>
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<tr>
<td>☐</td>
<td>MBL Calibrator 1-8</td>
<td>8 x 1 mL</td>
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<tr>
<td>☐</td>
<td>25x Wash Solution Concentrate</td>
<td>1 x 30 mL</td>
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<tr>
<td>☐</td>
<td>Biotinylated MBL Antibody</td>
<td>1 x 12 mL</td>
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<tr>
<td>☐</td>
<td>HRP-Streptavidin</td>
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<tr>
<td>☐</td>
<td>TMB Substrate</td>
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<tr>
<td>☐</td>
<td>Stop Solution</td>
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Ordering information

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<td>MBL Oligomer ELISA Kit</td>
<td>96 wells</td>
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<tr>
<td>KIT 029 - RUO</td>
<td>MBL Oligomer ELISA Kit  Research Use Only</td>
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<tr>
<td>WASH 029-30</td>
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<td>WASH 029-250</td>
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* available in selected countries only.
References


For more information, please contact BioPorto Diagnostics or your local BioPorto Diagnostics distributor

Distributed by:

BioPorto Diagnostics
BioPorto Diagnostics A/S
Grusbakken 8
DK-2820 Gentofte
Denmark

Tel: 040 - 45067 0 • Fax: 040 - 45067 490
Web: www.bioporto.com
E-mail: info@bioporto.com
Phone: (+45) 4529 0000
Fax: (+45) 4529 0001

Dianova GmbH
Beratung und Vertrieb
Warpurgstr. 45 • 20354 Hamburg • www.dianova.de
Tel: 040 - 45067 0 • Fax: 040 - 45067 490

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