CIRCULATING IMMUNE COMPLEXES

| Acknowledged Marker for the Management of Inflammatory Diseases

Autoimmune Diagnostics

Immunoglobulin receptor

CLR
Circulating Immune Complexes
Acknowledged Marker for the Management of Inflammatory Diseases

Clinical Importance of Circulating Immune Complexes

Circulating immune complexes (CICs) are the result of the host defense against endogenous or exogenous antigens. However, chronically elevated concentrations of CICs induce inflammatory organ or tissue damage.

CICs are detectable in a variety of systemic disorders such as autoimmune diseases, allergies and infectious diseases. Therefore CICs are acknowledged tools in the diagnosis of inflammatory diseases and provide useful clinical information regarding immunopathology, prognosis and follow-up.

Many of these tests are not suitable for routine use due to low sensitivity or specificity, interference or cost- and time-intensive handling. According to the WHO, in contrast to other methods, ELISA assays based on the interaction of the complement components C1q and C3 have proved to be highly sensitive and specific for the quantitative determination of CICs.

The IMTEC product line enhances these advantages by means of innovative production techniques which guarantee highly specific and reliable results.

Disease Status with Elevated CIC Concentrations

➤ Autoimmune Diseases
  Rheumatoid arthritis, SLE, vasculitis, Sjogren’s syndrome, ankylosing spondylitis, scleroderma

➤ Infectious Diseases
  Bacterial (streptococcal, staphylococcal, pneumococcal etc.), Viral (hepatitis B, hepatitis C, HIV) and Parasitic (malaria, toxoplasma, trypanosoma)

➤ Renal Diseases
  Glomerulonephritis, renal transplantation

➤ Hematologic and Neoplastic Diseases
  Leukemia, lymphoma, Hodgkin’s disease

Advantages of the IMTEC Circulating Immune Complex Assays

➤ Highly sensitive and specific detection of circulating immune complexes

➤ Easy to automate

➤ No interference with monomeric immunoglobulins, endogenous C1q, albumin, DNA or heparin.

➤ Differentiation between alternative and classical complement activation
**Immune Complex Assay Techniques**

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According to Reference 1.
# Assay Characteristics

**Principle**

ELISA

**Sample Material**

Serum

**Sample Volume**

10 µl

**Antigen Presentation**

covalently immobilised C1q or

immobilised monoclonal anti-C3d antibodies

**Specificity**

IgG or IgG/IgM

**Interpretation**

Quantitative (µg/ml) or Qualitative (cut-off)

**Incubation Times [min]**

60/30/10

**Detection / λ**

450 nm / 630 nm

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# The IMTEC Product Line

**Enzymimunoassay**  
Cat. No.

- IMTEC-CIC Screen (cut-off)  
  96 tests  
  ITC59030  
  ELISA for the Detection of C1q Binding  
  Circulating Immune Complexes (IgG/M)

- IMTEC-CIC IgG  
  96 tests  
  ITC59031  
  ELISA for the Quantitative Determination  
  of C1q Binding Circulating Immune Complexes (IgG)

- IMTEC-C3d-CIC  
  96 tests  
  ITC 59032  
  ELISA for the Quantitative Determination  
  of Circulating C3d-binding Immune Complexes (IgG)

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# References