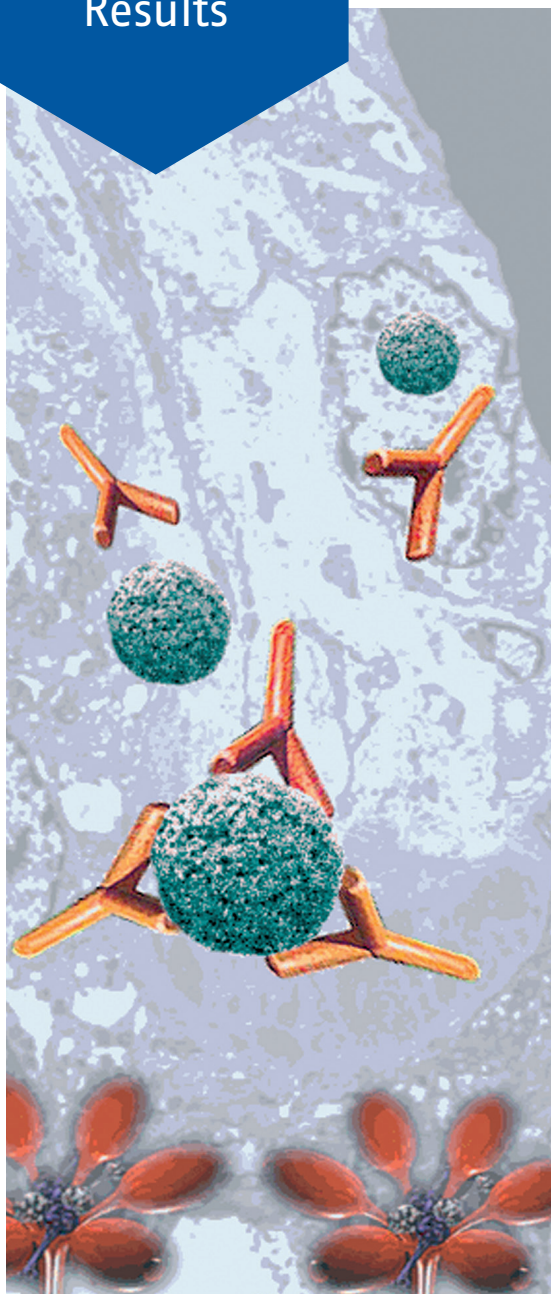
CIC ELISA

Prognosis and Follow up of Rheumatic and Autoimmune Diseases

Fast, Reliable and Clear-Cut Results



Results within 2 hours

Accurate

Highly Sensitive

BÜHLMANN

CF034-03E

CIC ELISA

Summary and Explanation

Circulating Immune Complexes (CIC) are formed by the interaction of antibodies with immunogenic antigens. Immune Complexes with only a slight excess of antibody and antigen are soluble and activate complement. CIC formation may be viewed as host defense directed against foreign antigens. Under normal circumstances CIC are cleared by phagocytosis. If CIC escape phagocytotic clearance they may be deposited in endothelial or vascular structures, thus provoking an inflammatory response leading to tissue damage. CIC have been associated with an increasing variety of diseases, such as autoimmune, rheumatic, infectious, metabolic, renal, hematological and neoplastic diseases.

Expected Values and Cut-off

- Expected values in 192 apparently healthy subjects:
  0.5-8.9 µg Eq/ml,
  median: 1.3 µg Eq/ml,
  mean: 1.7 µg Eq/ml.
- Cut-off (mean + 2 SD):
  3.2 µg Eq/ml,
  grey zone: 3.2 to 5.0 µg Eq/ml.
  -> negative <3.2;
  positive >5.0 µg Eq/ml
- Up to 10% of apparently healthy blood donors may show values above the cut-off.

Assay Performance Data

Intra-assay precision **3.6%**
(n=4 samples, range: 11-22 µg Eq/ml; 20 duplicates, CV range: 2.0-6.1%)

Inter-assay precision **11.3%**
(n=3 samples, range: 9.2-29.4 µg Eq/ml; 20 repetitions, CV range: 9.2-12.6 %)

Dilution linearity **104.8%**
(n=3 samples diluted 1:50, 100, 200, 400; measured in triplicate: recovery range: 91-127%)

Analytical sensitivity **0.6 µg Eq/ml**
(n=20, measured in duplicates)

Functional sensitivity **<1 µg Eq/ml**
(n=20 samples, measured in duplicates; cut-off intra-assay CV=10%)

Sample type **Serum and Plasma**

Sample storage and stability
2-8°C: up to 7 days
-20°C: for at least 6 months

Standard Range **1-50 µg Eq/ml**

ELISA

Precoated Microtiter Plate

wash 2x

100 µl Incubation Buffer, Standards, Controls or Samples (Serum or Plasma, diluted 1:50)

incubate 1 hour (± 5 min) at 18-28°C on a plate rotator

wash 3 x

add 100 µl of Enzyme Label

incubate 30 min (± 5 min) at 18-28°C on a plate rotator

wash 3 x

add 100 µl pNPP Substrate

incubate 30 min (± 5 min) at 18-28°C on a plate rotator

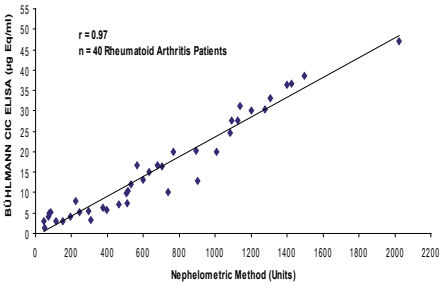
add 100 µl Stop Solution

Read at 405 nm

Time to Result: 2 Hours

Comparison with Nephelometric Method

In a comparison study the BÜHLMANN CIC ELISA assay had the highest sensitivity and a very good specificity (1).



1. Van Hoeyveld E and Bossuyt X.; Evaluation of seven commercial ELISA kits compared with the C1q solid-phase binding RIA for detection of circulating immune complexes. Clin Chem., **46**(2),283-5 (2000).

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EK-CIC 96 wells

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