



**TEST: IMMUNOGLOBULINS (IgG, IgA, IgM)**  
**COMPLEMENT C3 & C4**  
**C-REACTIVE PROTEIN**

**PRINCIPLE:**

The purpose is to quantitate serum levels of immunoglobulins (IgG, IgA, and IgM), complement components (C3, C4) and C-reactive protein (CRP). These measurements aid in the clinical diagnosis, assessment of disease activity, response to treatment, and follow-up in patients with various clinical conditions. Measurements of Complement C3 and Complement C4 aid in the diagnosis of immunologic disorders, especially those associated with deficiencies of complement components. Measurement of C-Reactive Protein aids in the evaluation of stress, trauma, infection, inflammation and surgery. Measurements of immunoglobulin A (IgA) and immunoglobulin M (IgM) aids in the diagnosis of abnormal protein metabolism and the body's lack of ability to resist infectious agents. Measurements of IgG aids in the diagnosis of autoimmune diseases, sarcoidosis, chronic liver disease, chronic and recurrent infections, lymphoid malignancies, multiple myeloma and severe and variable immunodeficiencies. These tests are performed by rate nephelometry. Rate nephelometry measures the rate of increase in light scattered from particles suspended in solution as a result of complexes formed during an antigen-antibody reaction.

**SPECIMEN REQUIREMENTS:**

2 ml serum collected in a red top tube with no additive or in a serum separator tube (gel barrier). Serum may be separated from the clot. If serum samples are not assayed within 6 hours, samples should be stored at +2°C to +8°C. If serum samples are not assayed within 24 hours, they should be stored frozen at -15°C to -20°C. Frozen samples should be thawed only once. Analyte deterioration may occur in samples that are repeatedly frozen and thawed.

**METHOD:** Rate Nephelometry.

**REFERENCES:**

1. Burtis, C.A., Ashwood, E.R., Tietz Textbook of Clinical Chemistry, 2<sup>nd</sup> Edition, W.B. Saunders, Philadelphia, PA (1994).

**Normal values:**

**IgG: 751-1560 mg/dl**

**IgA: 82-453 mg/dl**

**IgM: 46-304 mg/dl**

**C3: 79-152 mg/dl**

**C4: 16-38 mg/dl**

**CRP: < 0.8 mg/dl**

**Turnaround Time:** One Week