

## C1q Complement, for Turbidimetry

### General information: structure, function ...

C1q component of the complement system is a glycoprotein with an approximate molecular weight of 400 kDa, composed of 18 peptide chains divided in 3 sub-units of 6. Together with the components C1r and C1s, it constitutes the C1 complex.

C1q recognizes and binds to Fc fragments of IgG and IgM immunoglobulins bound to antigen, thus activating the classical complement pathway cascade. The conformational changes produced by immunoglobulin binding enzymatically activate C1r and C1s which then continue the complement cascade.

In addition to activation of the complement classical pathway, another function of C1q is the elimination of immune complexes and apoptotic cells from the body.

### Clinical Significance

C1q congenital deficiency is extremely rare (a few dozen cases in which the majority of patients suffered from Systemic Lupus (SLE)). Sometimes acquired deficiency is due to the presence of anti-C1q auto-antibodies.

Its deficiency has a significant effect on the host defense mechanisms and in the elimination of immune complexes. It is normally associated with a high incidence of autoimmune and infectious diseases (Systemic Lupus (SLE), Glomerulonephritis, Polymyositis, etc.).

Measurement of C1q is crucial for the differentiation between hereditary or acquired angioedema, because normal levels are found in hereditary angioedema while reduced levels occur in acquired angioedema.

### Assay Performances and Characteristics

- ➔ **Turbidimetric Immunoassays (TIA)**, enhanced with polystyrene particles, for their use on Clinical Chemistry automatic analyzers.
- ➔ Reagents, prediluted Calibrators and Controls in ready-to-use containers.
- ➔ Standardized to the *WHO's International Ref. Preparation for human serum complement Factors* (code: W1032).
- ➔ Excellent precision and reproducibility (CV<5%) over the entire measuring range (approx. 3 to 36 mg/dl).

### Catalogue

## 3diag - C1q - Tia Kit

 TD-42555     100 test

EAN/GTIN: 8434477303135

**Contains** Reagents, Calibrator and Controls

Also available for other analytical platforms. For further information, please contact the Customer Support Service at [support@3diag.com](mailto:support@3diag.com)