



Polyclonal Antisera:

Anti-Human C1q

For **Research Use Only**. Not for use in diagnostic procedures

Background

The C1q molecule is a large protein with a molecular weight of 410 kD. This hexamer is composed of three unique protein subunits (A, B, and C) with molecular weights of 29, 26, and 22 kD respectively, and is present in normal human serum at an approximate concentration of 70 µg/mL.

The assembled C1q molecule contains a central core or stalk, six collagen-like domains and six globular protein heads, resulting in the appearance of a "bouquet of tulips." The globular or terminal regions are responsible for binding the Fc portion of immunoglobulin (IgM, and IgG).

C1q is one of three subcomponents that together make the first component of the classical complement pathway, C1. C1q complexes with two C1s and two C1r components, and together, they form the C1 complex. Initiation of the classical complement pathway occurs when C1q binds with IgM or IgG containing antigen-antibody complexes.

Characterization

Highly purified human C1q was isolated from normal serum and used to immunize goats. The Anti-human C1q was tested against normal human plasma by double immunodiffusion, one-dimensional immunoelectrophoresis, two-dimensional immunoelectrophoresis, and quantitative rocket immunoelectrophoresis. The antiserum was determined to be monospecific for C1q at varying concentrations.

Applications

Applications of the C1q polyclonal antisera have been evaluated by various research facilities, and include Immunocytochemistry,¹ Immunoblot,² Western Blot,² IHC,^{2,3} and ELISA.^{4,5,6}

Specifications

- Volume/vial: 2.0 mL
- Storage: 2°C to 8°C* (≤ 30 days)
- Form: Whole Antiserum
- Preservative: ≤ 0.1% Sodium Azide

Species Cross Reactivity:

- Baboon, Horse, Dog, Cat, Rabbit, Hamster, Mouse, Rat, Guinea Pig

*For long-term storage (> 30 days), aliquot and store at ≤ -20°C. Avoid repeated freeze-thaw.

References

- ¹Fan, W., et al. Early Involvement of Immune/Inflammatory Response Genes in Retinal Degeneration in DBA/2J Mice. *Ophthalmology and Eye Diseases* (2009): 23-41.
- ²Stasi, K., et al. Complement Component 1Q (C1Q) Upregulation in Retina of Murine, Primate, and Human Glaucomatous Eyes. *Investigative Ophthalmology & Visual Science* (2006): 1024-1029.
- ³Yasojima, K., et al. Up-Regulated Production and Activation of the Complement System in Alzheimer's

Disease Brain." *American Journal of Pathology* (1999): 927-936.

⁴Hosszu, K., et al. Cell Surface Expression and Function of the Macromolecular C1 Complex on the Surface of Human Monocytes. *Frontiers in Immunology* (2012): 1-9.

⁵Dillon, S.P., et al. SLE and C1q: A quantitative ELISA for determining C1q levels in serum. *J. of Biotechnology* (2009): 1210-1214.

⁶Bigler, C., et al. Autoantibodies against Complement C1q Specifically Target C1q Bound on Early Apoptotic Cells. *The J. of Immunology* (2009): 1-10.

Anti-Human C1q – Cat. #A301

Also available:

MicroVue CIC-C1q EIA – Cat. #A001

MicroVue CIC-C1q Controls – Cat. #A013

C1q Protein – Cat. #A400

MoAb: Anti-human C1q – Cat. #A201

Biotinylated MoAb: Anti-human C1q – Cat. #A700

C1q Depleted Sera – Cat. #A509

