QUIDEL | Complement

Technical Data Sheet

Polyclonal Antisera:

Anti-Human C1s

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

Background

The C1s molecule is a monomeric zymogen protein with a molecular weight of 86 kD. In normal human serum the accepted concentration of C1s is approximately 34 µg/mL.

C1s is one of 3 subcomponents that together make the first component of the classical complement pathway, C1. Initiation of the classical complement pathway occurs when C1q binds with IgM or IgG containing antigen-antibody complexes.

Upon activation by C1r, the C1s monomer is fragmented into 2 disulfide-linked polypeptide chains, A and B. The enzymatically active site of the C1s molecule is located in the B fragment. With the proteolysis of C1s, C1 becomes active and can then begin to act upon C4 and C2.

C1s cleaves C4 into C4a and C4b. C4b then acts as a receptor for C2. Once bound, the C2 becomes a substrate for C1s, which then cleaves C2 into C2a and C2b. C2b remains bound to the C4b creating the C3/C5 convertase of the classical complement pathway.

Characterization

Highly purified human C1s was isolated from normal serum and used to immunize goats. The Anti-human C1s polyclonal antisera was tested against normal human plasma by double immunodiffusion, one-dimensional immunoelectrophoresis, quantitative radial immunodifussion, and quantitative rocket immunoelectrophoresis. The antiserum was determined to be monospecific for C1s at varying concentrations.

Applications

Applications of the C1s polyclonal antisera have been evaluated by various research facilities, and include, Western Blot,[1,2] IHC,[3] , and ELISA.[4,5]

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

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

References

[1]Dragon-Durey, M., et al. "Molecular Basis of a Selective C1s Deficiency Associated with Early Onset Multiple Autoimmune Diseases." *The J. of Immunology (2001): 7612-7616.*

[2]Avirutnan, P., et al. "Antagonism of the Complement Component C4 by Flavivirus Nostructural Protein NS1." *The J. of Experimental Medicine* (2010): 793-806.

[3]Yasojima, K., et al. "Up-Regulated Production and Activation of the Complement System in Alzheimer's Disease Brain." *Am. J. of Pathology (1999): 927-936.*

[4]Ingram, G., et al. "Systemic Complement Profiling in Multiple Sclerosis as a Biomarker of Disease State." *Multiple Sclerosis Journal (2012): 1401-1411.*

[5]Fure, H., et al. "A Neoepitope-Base Enzyme Immunoassay for Quantification of C1-Inhibitor in Complex with C1r and C1s." *Scandinavian J.of Immunology (1997): 553-557.*

Anti-Human C1s – Cat. #A302

Also available:

MicroVue CIC-C1q EIA – Cat. #A001

MicroVue CIC-C1q Controls – Cat. #A013

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