

## Polyclonal Antisera:

## Anti-Human C8

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

**Background**

C8 is a glycoprotein which is present in normal human serum/plasma at approximately 50 µg/mL. C8 is unique in that it is made up of 3 non-identical subunits,  $\alpha$ ,  $\beta$ , and  $\gamma$ . The molecular weights of these subunits are 64 kD, 64 kD, and 22 kD, respectively. The  $\alpha$  and  $\gamma$  chains are linked together by a disulfide bond, whereas the  $\beta$  chain is associated to the  $\alpha$ - $\gamma$  complex by a non-covalent bond. The main function of the C8 protein is to initiate the binding of C9 to form the Membrane Attack Complex (MAC).

With activation of the classical or alternative pathways of the complement system, C5 convertase cleaves the C5 chain into C5a and C5b. C5b remains bound to the convertase and will combine with C6 to form a C5b,6 complex. This complex normally interacts with C7 to form C5b,6,7 that becomes partially embedded in the target cell outer membrane.

The C5b,6,7 complex will subsequently bind C8 and multiple C9 molecules completing the terminal pathway. The C5b,6,7,8,9, or C5b-9 complex, is also known as the Membrane Attack Complex (MAC), which causes irreversible damage to the target cell membrane.

**Characterization**

Highly purified human C8 was isolated from normal serum and used to immunize goats. The anti-human C8 polyclonal antisera was tested against normal human plasma by double immunodiffusion, one-dimensional immunoelectrophoresis, quantitative radial immunodiffusion, and quantitative rocket immunoelectrophoresis. The anti-serum was determined to be monospecific for C8 at varying concentrations.

**Applications**

Applications of the C8 polyclonal antisera have been evaluated by various research facilities, and include Immunofluorescence<sup>1</sup> and ELISA.<sup>2</sup>

**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, Dog, Rabbit, Guinea Pig, Cat, Hamster, Horse, Rat, Mouse

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

**References**

<sup>1</sup>Meri, S. et al. "Activation of the Alternative Pathway of Complement by Monoclonal Light Chains in Membranoproliferative Glomerulonephritis." *The Journal of Experimental Medicine* (1992): 939-950.

<sup>2</sup>Abdulla, Salima Abubaker. Developmental Innate Immunodeficiency: *Comparison of Term Neonatal Neutrophil Proteinases and Complement Component Levels Relative to Adults*. Diss. Cardiff University School of Medicine, United Kingdom, 2012. Web.

Anti-Human C8 – Cat. #A309

Also available:

MoAb: Anti-human C8 – Cat. # A249

Biotinylated MoAb: Anti-human C8 – Cat. #A708

C8 Depleted Serum – Cat. #A504

C8 Protein – Cat. #A406