

Synonym

Complement C5,C5,CPAMD4

Source

Biotinylated Human Complement C5, His,Avitag(CO5-H82E9) is expressed from human 293 cells (HEK293). It contains AA Gln 19 - Arg 677 & Thr 678 - Cys 1676 (Accession # [P01031-1](#)).
Predicted N-terminus: Gln 19 (β chain) & Thr 678 (α chain)

Molecular Characterization

Complement C5(Gln 19 - Cys 1676) P01031-1	Poly-his	Avi
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This protein carries a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™). The mature form of Complement C5 is a disulfide-linked heterodimer composed of proteolytically cleaved α and β chain. Each α and β chain has a calculated MW of 73.9 kDa (β chain) and 116.1 kDa (α chain). The protein migrates as 75 kDa, 120 kDa and 200 kDa under reducing (R) condition, and 200 kDa under non-reducing (NR) condition (SDS-PAGE) due to glycosylation.

Labeling

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

Purity

>95% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

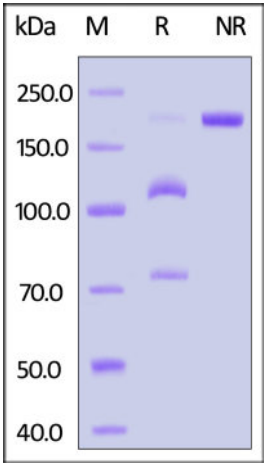
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

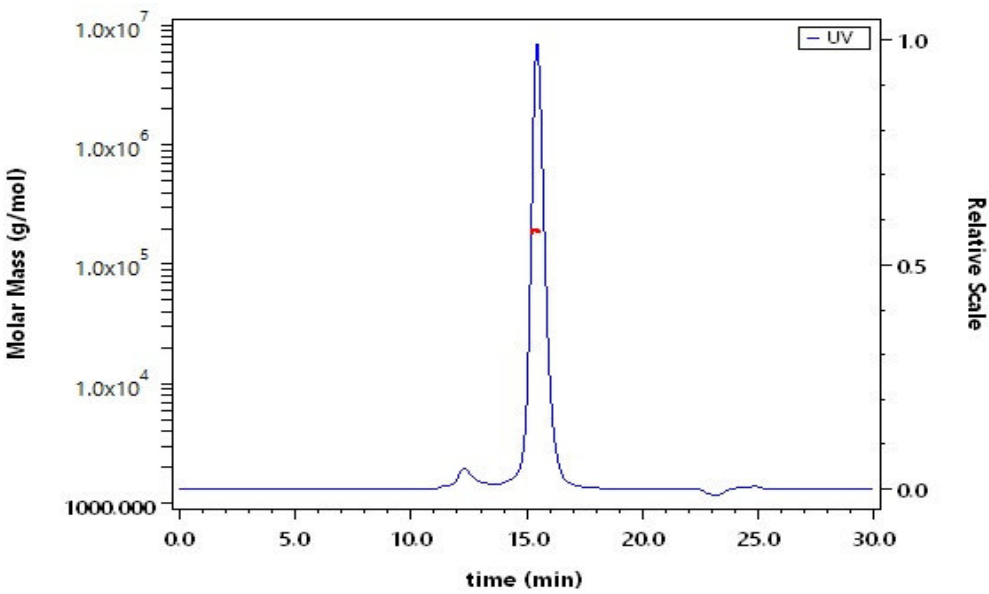
- 20°C to -70°C for 12 months in lyophilized state;
- 70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



Biotinylated Human Complement C5, His,Avitag on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

SEC-MALS



The purity of Biotinylated Human Complement C5, His,Avitag (Cat. No. CO5-H82E9) is more than 90% and the molecular weight of this protein is around 175-215 kDa verified by SEC-MALS.

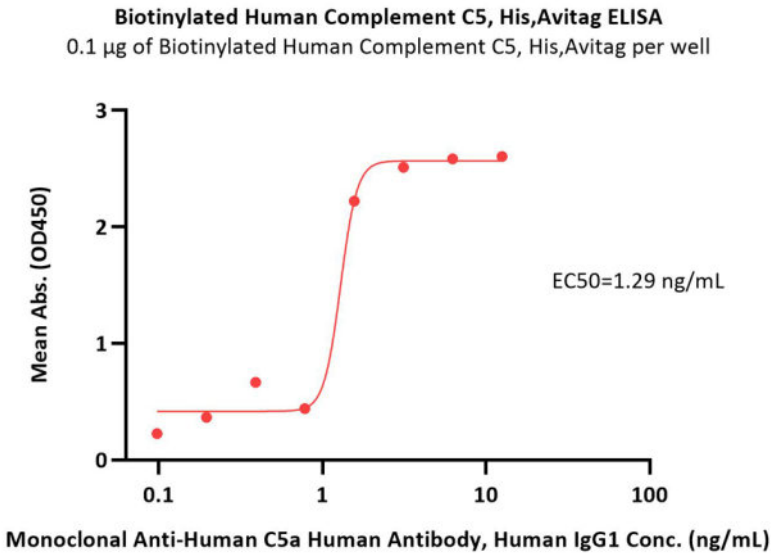
[Report](#)

Bioactivity-ELISA

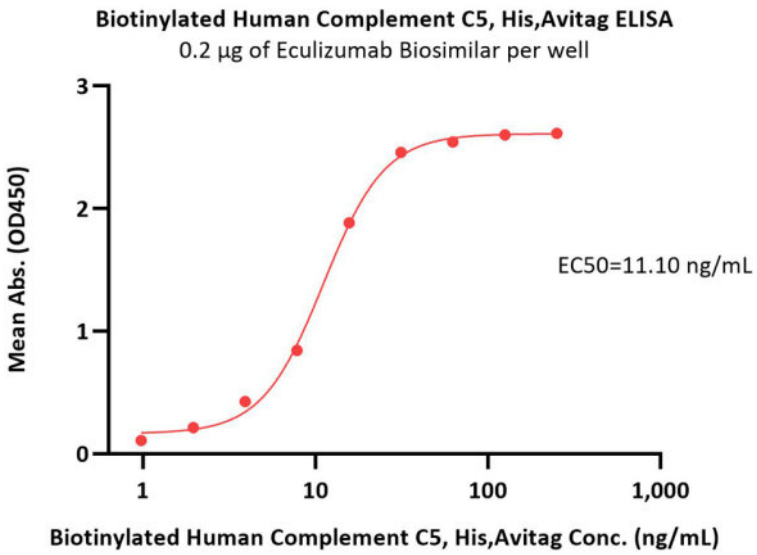


Biotinylated Human Complement C5 Protein, His,Avitag™ (MALS verified)

Catalog # CO5-H82E9



Immobilized Biotinylated Human Complement C5, His,Avitag (Cat. No. CO5-H82E9) at 1 µg/mL (100 µL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 µg/well) plate can bind Monoclonal Anti-Human C5a Human Antibody, Human IgG1 with a linear range of 0.1-3 ng/mL (QC tested).



Immobilized Eculizumab Biosimilar at 2 µg/mL (100 µL/well) can bind Biotinylated Human Complement C5, His,Avitag (Cat. No. CO5-H82E9) with a linear range of 1-63 ng/mL (Routinely tested).

Background

Derived from proteolytic degradation of complement C5, C5 anaphylatoxin is a mediator of local inflammatory process. C5 precursor is first processed by the removal of 4 basic residues, forming two chains, beta and alpha, linked by a disulfide bond. C5 convertase activates C5 by cleaving the alpha chain, releasing C5a anaphylatoxin and generating C5b (beta chain + alpha' chain). Activation of C5 by a C5 convertase initiates the spontaneous assembly of the late complement components, C5-C9, into the membrane attack complex. C5b has a transient binding site for C6. The C5b-C6 complex is the foundation upon which the lytic complex is assembled. The C5a anaphylatoxin interacts with C5AR1 and tick complement inhibitor. C5a is also a potent chemokine which stimulates the locomotion of polymorphonuclear leukocytes and directs their migration toward sites of inflammation.

