Human Complement C5 Protein, Fc Tag

Catalog # CO5-H5253

Synonym

Complement C5,C5,CPAMD4

Source

Human Complement C5 Protein, Fc Tag(CO5-H5253) is expressed from human 293 cells (HEK293). It contains AA Gln 19 - Cys 1676 (Accession # P01031-1). Predicted N-terminus: Gln 19

Molecular Characterization

Complement C5(Gln 19 - Cys 1676) P01031-1	Fc(Pro 100 - Lys 330) P01857

This protein carries a human IgG1 Fc tag at the C-terminus.

The protein has a calculated MW of 212.8 kDa. The protein migrates as 70 kDa,150 kDa and >180 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per μg by the LAL method / rFC method.

Purity

>90% as determined by SDS-PAGE.

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

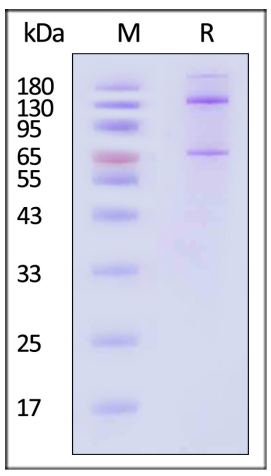
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

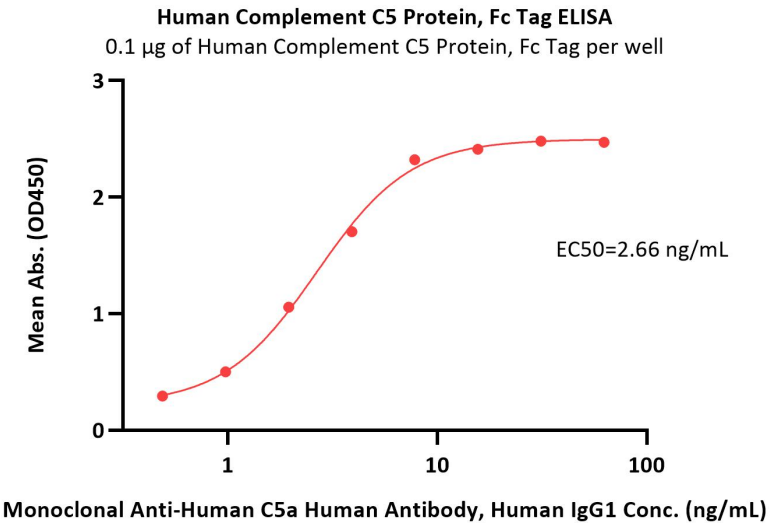
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE

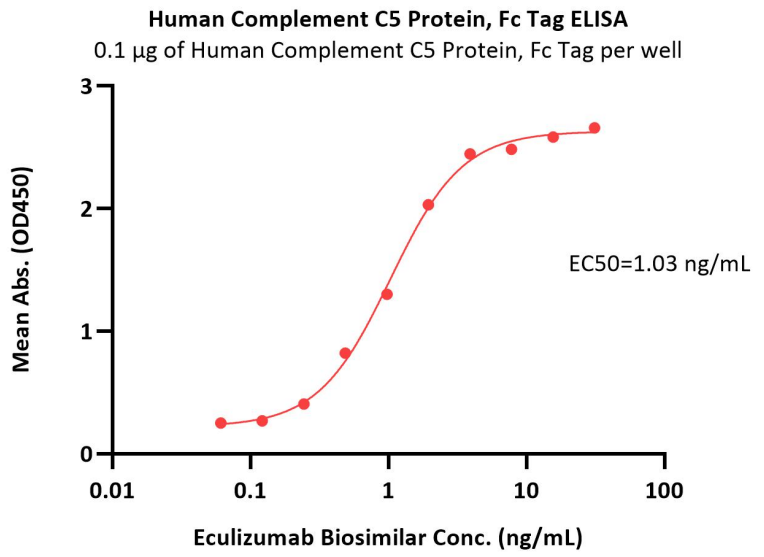


Human Complement C5 Protein, Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With Star Ribbon Pre-stained Protein Marker).

Bioactivity-ELISA



Immobilized Human Complement C5 Protein, Fc Tag (Cat. No. CO5-H5253) at 1 μg/mL (100 μL/well) can bind Monoclonal Anti-Human C5a Human Antibody, Human IgG1 with a linear range of 0.5-4 ng/mL (QC tested).



Immobilized Human Complement C5 Protein, Fc Tag (Cat. No. CO5-H5253) at 1 μg/mL (100 μL/well) can bind Eculizumab Biosimilar with a linear range of 0.1-2 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.