Human Complement C5a Protein, Tag Free

Catalog # C5A-H5116

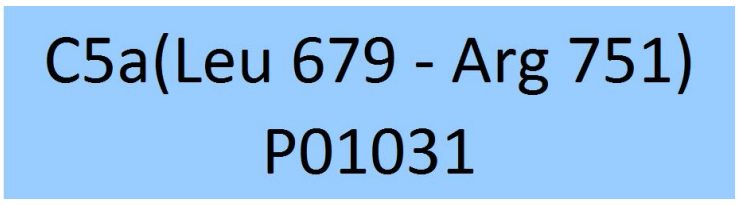
Synonym

C5a,Complement Component 5a

Source

Human Complement C5a, Tag Free(C5A-H5116) is expressed from E. coli cells.
It contains AA Leu 679 - Arg 751 (Accession # P01031).
Predicted N-terminus: Met

Molecular Characterization



This protein carries no "tag".

The protein has a calculated MW of 8.3 kDa. The protein migrates as 10-12 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE).

Endotoxin

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

Purity

>95% 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

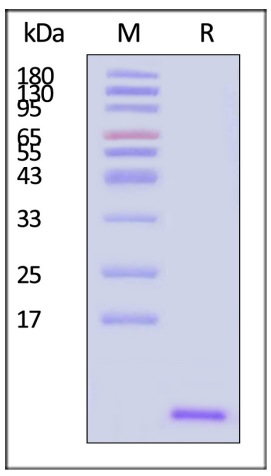
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

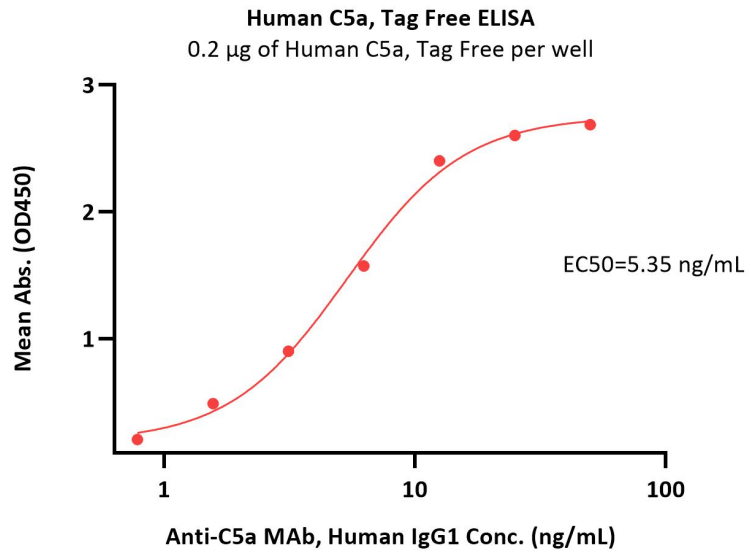
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



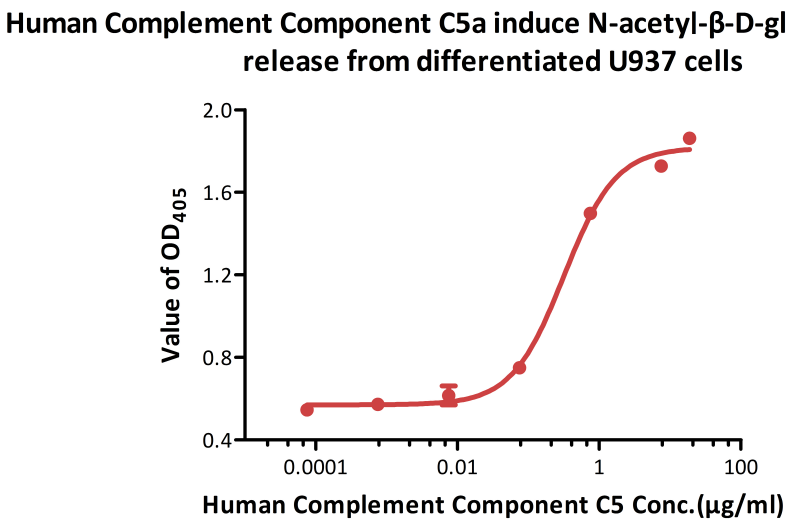
Human Complement C5a, Tag Free on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With Star Ribbon Pre-stained Protein Marker).

Bioactivity-ELISA



Immobilized Human Complement C5a, Tag Free (Cat. No. C5A-H5116) at 2 μg/mL (100 μL/well) can bind Anti-C5a MAb, Human IgG1 with a linear range of 0.8-13 ng/mL (QC tested).

Bioactivity-CELL BASE



Human Complement C5a, Tag Free (Cat. No. C5A-H5116) induce N-acetyl-β-D-glucosaminidase release from differentiated U937 cells. The ED50 for this effect is 0.215-0.323 μg/mL (Routinely tested).

Background

Complement Component C5a (C5a) is also known as C5,and is a protein fragment released from complement component C5.,is a potent chemotactic factor for human peripheral blood neutrophils and monocytes, and is believed to play an important role in a number of inflammatory conditions. There are several functions in the below: C5a is an anaphylatoxin, causing the release of histamine from mast cells; C5a is effective leukocyte chemoattractants, causing the accumulation of white blood cells, especially neutrophil granulocytes, at sites of complement activation; C5a activates white blood cells by increasing avidity for white blood cell integrins and upregulating the Lipoxygenase pathway for arachidonic acid metabolism; C5a is a powerful inflammatory mediator, and seems to be a key factor in the development of pathology of many inflammatory diseases involving the complement system; C5a modulates balance between activating versus inhibitory IgG Fc receptors on leukocytes, thereby enhancing autoimmune response.