

# Recombinant Human Complement C5A Protein

Catalog No.: RP01128 **Recombinant**

## Sequence Information

Species	Gene ID	Swiss Prot
Human	727	P01031

**Tags**  
NO-Tag

### Synonyms

C5; CPAMD4; Complement C5; C3 and PZP-like alpha-2-macroglobulin domain-containing protein 4; Cleaved into: Complement C5 beta chain; Complement C5 alpha chain; C5a anaphylatoxin; Complement C5 alpha' chain

## Product Information

Source	Purification
<i>E. coli</i>	≥ 90 % as determined by SDS-PAGE.

Calculated MW	Observed MW
8.17 kDa	10-15 kDa

**Endotoxin**  
< 0.1 EU/μg of the protein by LAL method.

**Formulation**  
Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

**Reconstitution**  
Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

## Contact

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## Background

Human Complement 5a (C5a) is an enzymatically generated glycoprotein that belongs to a family of structurally and functionally related proteins known as anaphylatoxins. Human C5a has four alpha-helices plus three intrachain disulfide bonds that create a triple loop structure. In serum, proteolytic processing removes the C-terminal arginine, creating a low activity C5adesArg74 molecule. Human C5a is 60% and 54% aa identical to mouse and rat C5a, respectively. C5a binds to a signaling G-protein coupled receptor (C5aR/CD88) and a non-signaling GPCR termed C5L2. Activation of Cd88 results in neutrophil chemotaxis and endothelial cell activation. It also triggers an oxidative burst in macrophages and neutrophils, and induces release of histamine in basophils and mast cells.

## Basic Information

### Description

Recombinant Human Complement C5A Protein is produced by *E. coli* expression system. The target protein is expressed with sequence (Thr678-Arg751) of Human Complement C5A (Accession #NP\_001726.2) fused with no tag.

### Bio-Activity

Measured by its ability to induce N-acetyl-β-D-glucosaminidase release from differentiated U937 human histiocytic lymphoma cells. The ED<sub>50</sub> for this effect is typically 5-15 ng/mL.

### Shipping

The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

### Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt. After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week. Avoid repeated freeze/thaw cycles.

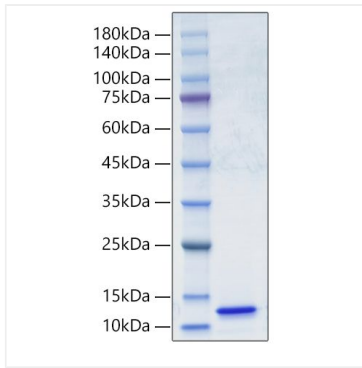
### Operational Notes

For your safety and health, please wear a lab coat and disposable gloves for handling.



## Validation Data

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Recombinant Human Complement C5A  
Protein was determined by SDS-PAGE under  
reducing conditions with Coomassie Blue.