

Human Complement C5a - Purified

Alternate names: CPAMD4, Complement Component 5

Catalog No.: AR31183PU-S

Quantity: 5 µg

Background: Complement 5a (C5a) is an enzymatically generated glycoprotein belonging to the anaphylatoxin family of structurally and functionally related proteins. Generated upon the activation of the complement system, C5a, together with C4a, C3a, and the membrane attack complex (C5b-9), functions as a central player in host defense by inducing smooth muscle cell contraction, increased vascular permeability, and histamine release from mast cells and basophilic leukocytes through cell degranulation. In addition to acting as a direct mediator of localized inflammatory response, C5a also initiates both the synthesis and release of IL-8 from monocytes and bronchial epithelial cells, stimulates the proliferation of neurons and hepatocytes, and functions as a potent chemoattractant. Where C5a deficiency, a rare defect of the complement pathway caused by the mutation of the C5a gene, is associated with susceptibility to severe infections, excessive C5a activation has been linked to liver fibrosis, sepsis, adult respiratory distress syndrome, rheumatoid arthritis, Alzheimer's disease, and ischemic heart disease. Human C5a shares 60% and 54% sequence identity to mouse and rat C5a, respectively. The human C5 gene encodes a 1,676 amino acid glycoprotein that is comprised of a disulfide-linked C5 alpha and a C5 beta chain, the former of which contains the active, 74 amino acid C5a anaphylatoxin chain.

Uniprot ID: [P01031](#)

NCBI: [9606](#)

GeneID: [727](#)

Species: Human

Source: E. coli

Format: **State:** Lyophilized (0.2µ Sterile filtered) purified protein

Purity: >98% pure by SDS-PAGE gel and HPLC analyses

Reconstitution: Restore in water to a concentration of 0.1-1.0 mg/ml.

Do not vortex. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.

Description: Recombinant Human C5a is an 8.28 kDa glycoprotein containing the 74 amino acid residues of the C5a anaphylatoxin chain.

AA Sequence:

TLQKKIEEIA AKYKHSVVKK CCYDGACVNN DETCEQRAAR ISLGPRCIKA FTECCVASQ LRANISHKDM QLGR

Biological Activity: Determined by its ability to chemoattract Human monocytes using a

concentration range of 1.0-10.0 ng/ml.

Molecular weight: 8.28 kDa (74 amino acids)

Storage:

Store lyophilized at 2-8°C for 6 months or at -20°C long term.

After reconstitution store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C long term.

Avoid repeated freezing and thawing.

Shelf life: one year from despatch.