Complement Component 5a (C5A) Eukaryotic Protein

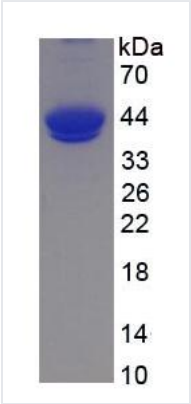
PRODUCT OVERVIEW

Product Name	Complement Component 5a (C5a), Protein
Full Product Name	Eukaryotic Complement Component 5a (C5a)
Product Gene Name	C5a protein
Host	293F cell
Form/Format	Freeze-dried powder
Purity/Purification	> 95%
Preparation and Storage	Avoid repeated freeze/thaw cycles. Store at 2-8 degree C for one month. Aliquot and store at -80 degree C for 12 months. The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37 degree C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.
Matching Pairs	Unconjugated Antibody: C5a (MBS2111866) Immunogen: C5a (MBS2086705)
Matching Pairs	APC-CY7 Conjugated Antibody: C5a (MBS2163424) Immunogen: C5a (MBS2086705)
Matching Pairs	PE Conjugated Antibody: C5a (MBS2164291) Immunogen: C5a (MBS2086705)
Matching Pairs	APC Conjugated Antibody: C5a (MBS2165157) Immunogen: C5a (MBS2086705)
Matching Pairs	Cy3 Conjugated Antibody: C5a (MBS2166023) Immunogen: C5a (MBS2086705)
Matching Pairs	Biotin Conjugated Antibody: C5a (MBS2166889) Immunogen: C5a (MBS2086705)
Matching Pairs	HRP Conjugated Antibody: C5a (MBS2167754) Immunogen: C5a (MBS2086705)
Matching Pairs	FITC Conjugated Antibody: C5a (MBS2168620) Immunogen: C5a (MBS2086705)
Molecular Weight	35.0kDa; 35kDa
OMIM	M57729 mRNA
3D Structure	ModBase 3D Structure for P01031
Supply Chain Verification	Manufactured in a lab with traceable raw materials. Bulk orders can typically be prepared to the customer's specifications, please inquire.
Fragment	Thr678~Arg751
Tag	N-terminal His Tag and C-terminal Fc Region of Human IgG1
Buffer Formulation	20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 5% Trehalose and Proclin300.
Source Note	Eukaryotic expression
Organism Species	Human

Endotoxin Level	<1.0EU per 1ug (determined by the LAL method)
Isoelectric Point	8.9
Subcellular Location	Secreted, Membrane attack complex
Usage	Reconstitute in PBS or others.
Product Categories/Family for C5a protein	Eukaryotic proteins
ISO Certification	Manufactured in an ISO 9001:2015 and ISO 13485:2016 Certified Laboratory.
Applications Tested/Suitable for C5a protein	Positive Control, Immunogen, SDS-PAGE, Western Blot (WB)
Related Product Information for C5a protein	MBS2086705 is a protein targeting C5a. Also known as Eukaryotic Complement Component 5a (C5a). Host: 293F cell.
Other Notes	Small volumes of C5a protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

TLQ KKIEEIAAKY KHSVVKKCCY DGACVNNDET CEQRAARISL GPRCIKAFTE CCVVASQLRA NISHKDMQLG R

Sequence Information of C5a protein



SDS-Page of C5a protein

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for C5a. It may not necessarily be applicable to this product.

NCBI GI #	953514538
NCBI GeneID	727
NCBI Accession #	NP_001304092.1
UniProt Primary Accession #	P01031
UniProt Secondary Accession #	Q14CJ0; Q27I61
UniProt Related Accession #	P01031
GenBank Nucleotide #	NM_001317163.1
NCBI Official Full Name	complement C5 isoform 2
NCBI Official Synonym Full Names	complement C5
NCBI Official Symbol	C5
NCBI Official Synonym Symbols	C5D; C5a; C5b; ECLZB; CPAMD4
UniProt Protein Name	Complement C5
UniProt Synonym Protein Names	C3 and PZP-like alpha-2-macroglobulin domain-containing protein 4

UniProt Gene Name	C5
UniProt Synonym Gene Names	CPAMD4
NCBI Protein Information	complement C5
NCBI Summary for C5a	This gene encodes a component of the complement system, a part of the innate immune system that plays an important role in inflammation, host homeostasis, and host defense against pathogens. The encoded preproprotein is proteolytically processed to generate multiple protein products, including the C5 alpha chain, C5 beta chain, C5a anaphylatoxin and C5b. The C5 protein is comprised of the C5 alpha and beta chains, which are linked by a disulfide bridge. Cleavage of the alpha chain by a convertase enzyme results in the formation of the C5a anaphylatoxin, which possesses potent spasmogenic and chemotactic activity, and the C5b macromolecular cleavage product, a subunit of the membrane attack complex (MAC). Mutations in this gene cause complement component 5 deficiency, a disease characterized by recurrent bacterial infections. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Nov 2015]
UniProt Comments for C5a	C5: 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. Defects in C5 are the cause of complement component 5 deficiency (C5D). A rare defect of the complement classical pathway associated with susceptibility to severe recurrent infections, predominantly by Neisseria gonorrhoeae or Neisseria meningitidis. An association study of C5 haplotypes and genotypes in individuals with chronic hepatitis C virus infection shows that individuals homozygous for the C5_1 haplotype have a significantly higher stage of liver fibrosis than individuals carrying at least 1 other allele (PubMed:15995705). Protein type: Secreted; Secreted, signal peptide Chromosomal Location of Human Ortholog: 9q33.2 Cellular Component: extracellular region Molecular Function: chemokine activity; protein binding; receptor binding Biological Process: activation of MAPK activity; cell surface receptor linked signal transduction; chemotaxis; complement activation; G-protein coupled receptor protein signaling pathway; regulation of complement activation; response to stress Disease: Complement Component 5 Deficiency; Eculizumab, Poor Response To
Research Articles on C5a	**1.** In an arterial thrombosis model, plasminogen activator administration increased C5a levels. Overall, these findings suggest plasmin bridges thrombosis and the immune response by liberating C5a and inducing MAC assembly.
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