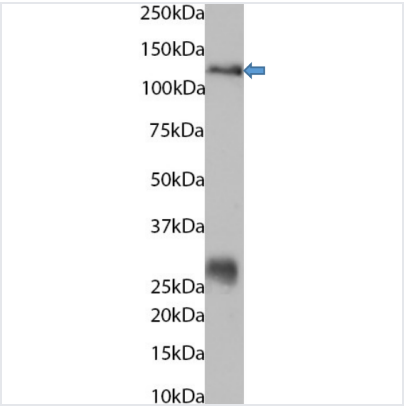
C3A Antibody

PRODUCT OVERVIEW

Product Name	C3a, Antibody
Full Product Name	Anti-C3a [YHP133]
Product Gene Name	anti-C3a antibody
Product Synonym Names	Complement C3a; Complement C3 alpha chain
Isotype	Rabbit IgG kappa
Clone Number	YHP133
Species Reactivity	Human
Form/Format	PBS with 0.02% Proclin 300.
Purity/Purification	Purified. Protein A affinity purified
Concentration	1mg/ml (lot specific)
Specificity	This antibody recognizes and binds the human C3a.
Preparation and Storage	Store at 4 degree C for up to 3 months. For longer storage, aliquot and store at -20 degree C.
Molecular Weight	187,148 Da
Chromosome Location	Chromosome: 19; NC_000019.9 (6677846..6720662, complement). Location: 19p13.3-p13.2
OMIM	120700
3D Structure	ModBase 3D Structure for P01024
Animal-free Manufacturing Platform	The recombinant antibody is manufactured using a recombinant, mammalian HEK293-based expression platform. The manufacturing platform is animal-free and animal component-free.
Product Categories/Family for anti-C3a antibody	complement system; complement activation; innate immunity; anaphylatoxin
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-C3a antibody	Diagnostics
Application Notes for anti-C3a antibody	This antibody is recommended for detecting C3 or C3a in a biological sample using fluorescence resonance energy transfer (FRET). The biological sample is incubated with two antibodies that bind to human C3a. The first antibody binds the neoepitope and the second antibody does not bind the neoepitope and wherein the antibodies are a FRET pair. The detection of C3a is done by measuring the FRET signal. The biological sample may be human serum, plasma, cell supernatant, cell lysate, or urine (US20210025886).
Related Product Information for anti-C3a antibody	The original antibody was generated using human C3a as an immunogen. This chimeric rabbit antibody was made using the variable domain sequences of the original Human IgG1 format for improved compatibility with existing reagents assays and techniques.
Product References and Citations for anti-C3a antibody	Forbes et al.N/A
Other Notes	Small volumes of anti-C3a antibody 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.
Searchable Terms for C3a purchase	MBS489062 is an antibody targeting C3a. Also known as Anti-C3a [YHP133]. Reactive in Human.



Western Blot (WB) of anti-C3a antibody
Western blot using anti-C3a antibody YHP133 . Human serum (35µg protein in RIPA buffer) was resolved via SDS-PAGE, and the subsequent blot was probed with the mouse version of YHP133 at 0.3µg/ml before detection using an anti-mouse secondary antibody. A primary incubation of 1 hour was used, and proteins were detected by chemiluminescence. During testing, a non-specific 26kDa band was observed; further optimisation of assay conditions may be required.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for C3a. It may not necessarily be applicable to this product.

NCBI GI #	152012784
NCBI GeneID	718
NCBI Accession #	AAI50180.1
UniProt Primary Accession #	P01024
UniProt Secondary Accession #	A7E236
UniProt Related Accession #	P01024
NCBI Official Full Name	Complement component 3
NCBI Official Synonym Full Names	complement component 3
NCBI Official Symbol	C3
NCBI Official Synonym Symbols	ASP; C3a; C3b; AHUS5; ARMD9; CPAMD1
UniProt Protein Name	Complement C3
UniProt Synonym Protein Names	C3 and PZP-like alpha-2-macroglobulin domain-containing protein 1Cleaved into the following 11 chains:Complement C3 beta chainComplement C3 alpha chainC3a anaphylatoxinAcylation stimulating protein; ASP; Alternative name(s):; C3adesArg
Protein Family	C3a anaphylatoxin chemotactic receptor
UniProt Gene Name	C3
UniProt Synonym Gene Names	CPAMD1; ASP
UniProt Entry Name	CO3_HUMAN
NCBI Protein Information	complement C3; prepro-C3; C3a anaphylatoxin; complement component C3; complement component C3a; complement component C3b; acylation-stimulating protein cleavage product; C3 and PZP-like alpha-2-macroglobulin domain-containing protein 1
NCBI Summary for C3a	Complement component C3 plays a central role in the activation of complement system. Its activation is required for both classical and alternative complement activation pathways. People with C3 deficiency are susceptible to bacterial infection. [provided by RefSeq, Feb 2009]

UniProt Comments for C3a	C3: C3 plays a central role in the activation of the complement system. Its processing by C3 convertase is the central reaction in both classical and alternative complement pathways. After activation C3b can bind covalently, via its reactive thioester, to cell surface carbohydrates or immune aggregates. Defects in C3 are the cause of complement component 3 deficiency (C3D). A rare defect of the complement classical pathway. Patients develop recurrent, severe, pyogenic infections because of ineffective opsonization of pathogens. Some patients may also develop autoimmune disorders, such as arthralgia and vasculitic rashes, lupus-like syndrome and membranoproliferative glomerulonephritis. Genetic variation in C3 is associated with susceptibility to age-related macular degeneration type 9 (ARMD9). ARMD is a multifactorial eye disease and the most common cause of irreversible vision loss in the developed world. In most patients, the disease is manifest as ophthalmoscopically visible yellowish accumulations of protein and lipid that lie beneath the retinal pigment epithelium and within an elastin- containing structure known as Bruch membrane. Defects in C3 are a cause of susceptibility to hemolytic uremic syndrome atypical type 5 (AHUS5). An atypical form of hemolytic uremic syndrome. It is a complex genetic disease characterized by microangiopathic hemolytic anemia, thrombocytopenia, renal failure and absence of episodes of enterocolitis and diarrhea. In contrast to typical hemolytic uremic syndrome, atypical forms have a poorer prognosis, with higher death rates and frequent progression to end-stage renal disease. Susceptibility to the development of atypical hemolytic uremic syndrome can be conferred by mutations in various components of or regulatory factors in the complement cascade system. Other genes may play a role in modifying the phenotype. Increased levels of C3 and its cleavage product ASP, are associated with obesity, diabetes and coronary heart disease. Short-term endurance training reduces baseline ASP levels and subsequently fat storage. Protein type: Secreted, signal peptide; Secreted; Inhibitor Chromosomal Location of Human Ortholog: 19p13.3-p13.2 Cellular Component: extracellular space; plasma membrane; extracellular region Molecular Function: protein binding; endopeptidase inhibitor activity; C5L2 anaphylatoxin chemotactic receptor binding; receptor binding Biological Process: regulation of immune response; complement activation, alternative pathway; signal transduction; fatty acid metabolic process; complement activation; G-protein coupled receptor protein signaling pathway; positive regulation of angiogenesis; positive regulation of activation of membrane attack complex; positive regulation of G-protein coupled receptor protein signaling pathway; positive regulation of type IIa hypersensitivity; regulation of complement activation; innate immune response; immune response; positive regulation of protein amino acid phosphorylation; inflammatory response; complement activation, classical pathway Disease: Complement Component 3 Deficiency, Autosomal Recessive; Hemolytic Uremic Syndrome, Atypical, Susceptibility To, 5; Macular Degeneration, Age-related, 9
Research Articles on C3a	**1.** This study shows an association between a common single nucleotide polymorphism in C3 and susceptibility for community-acquired bacterial meningitis.
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