Complement C4a (C4A) Native Protein

PRODUCT OVERVIEW

Product Name	Complement C4a, Native Protein
Full Product Name	Complement C4a protein
Product Gene Name	C4A native protein
Product Synonym Names	C4a protein
Host	Human
Form/Format	10mM Hepes, pH 7.0, with 120mM NaCl, no preservatives added.
Purity/Purification	> 95% pure
Preparation and Storage	Aliquot and store at -70 degree C or lower. Avoid repeated freeze/thaw cycles.
Molecular Weight	8.75 kDa
OMIM	120790
3D Structure	ModBase 3D Structure for P0C0L4
Source Note	Human serum/plasma
Protein Type	Native
Biohazard Information	The source of C4a is human serum, therefore appropriate precautions must be observed even though the source was shown by certified tests to be negative for HBsAg, HTLV-I/II, STS, and for antibodies to HCV, HIV-1 and HIV-II. Injection can cause anaphylatic shock which is a generalized circulatory collapse similar to that caused by an allergic reaction.
Dry Ice Shipment	Extra charge fee may add to your shipping cost as dry ice is required to ship this product.
Product Categories/Family for C4A native protein	Immunology; Native Protein; Complements
Related Product Information for C4A native protein	MBS537683 is a native protein targeting C4A. Also known as Complement C4a protein. Host: Human. Purified Complement C4a protein isolated from human plasma
Other Notes	Small volumes of C4A native 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.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for C4A. It may not necessarily be applicable to this product.

NCBI GI #	67190748
NCBI GeneID	720
NCBI Accession #	NP_009224.2
UniProt Primary Accession #	P0C0L4
UniProt Secondary Accession #	P01028; P78445; Q13160; Q13906; A6H8M8; A6NHJ5; A7E2V2; B0QZR6; B0V2C8; B2RUT6; B7ZVZ6
UniProt Related Accession #	P0C0L4
GenBank Nucleotide #	NM_007293.2

NCBI Official Full Name	complement C4-A isoform 1 preproprotein
NCBI Official Synonym Full Names	complement component 4A (Rodgers blood group)
NCBI Official Symbol	C4A
NCBI Official Synonym Symbols	C4; RG; C4S; CO4; C4A2; C4A3; C4A4; C4A6; C4AD; CPAMD2
UniProt Protein Name	Complement C4-A
UniProt Synonym Protein Names	Acidic complement C4; C3 and PZP-like alpha-2-macroglobulin domain-containing protein 2
Protein Family	Complement C4
UniProt Gene Name	C4A
UniProt Synonym Gene Names	CO4; CPAMD2
UniProt Entry Name	CO4A_HUMAN
NCBI Protein Information	complement C4-A
NCBI Summary for C4A	This gene encodes the acidic form of complement factor 4, part of the classical activation pathway. The protein is expressed as a single chain precursor which is proteolytically cleaved into a trimer of alpha, beta, and gamma chains prior to secretion. The trimer provides a surface for interaction between the antigen-antibody complex and other complement components. The alpha chain is cleaved to release C4 anaphylatoxin, an antimicrobial peptide and a mediator of local inflammation. Deficiency of this protein is associated with systemic lupus erythematosus and type I diabetes mellitus. This gene localizes to the major histocompatibility complex (MHC) class III region on chromosome 6. Varying haplotypes of this gene cluster exist, such that individuals may have 1, 2, or 3 copies of this gene. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Nov 2014]
UniProt Comments for C4A	C4A: C4 plays a central role in the activation of the classical pathway of the complement system. It is processed by activated C1 which removes from the alpha chain the C4a anaphylatoxin. The remaining alpha chain fragment C4b is the major activation product and is an essential subunit of the C3 convertase (C4b2a) and the C5 convertase (C3bC4b2a) enzymes of the classical complement pathway. Defects in C4A are the cause of complement component 4A deficiency (C4AD). A rare defect of the complement classical pathway associated with the development of autoimmune disorders, mainly systemic lupus with or without associated glomerulonephritis. Defects in C4A are a cause of susceptibility to systemic lupus erythematosus (SLE). A chronic, inflammatory and often febrile multisystemic disorder of connective tissue. It affects principally the skin, joints, kidneys and serosal membranes. It is thought to represent a failure of the regulatory mechanisms of the autoimmune system. Interindividual copy- number variation (CNV) of complement component C4 and associated polymorphisms result in different susceptibilities to SLE. The risk of SLE susceptibility has been shown to be significantly increased among subjects with only two copies of total C4. A high copy number is a protective factor against SLE. Protein type: Secreted; Inhibitor; Secreted, signal peptide Chromosomal Location of Human Ortholog: 6p21.3 Cellular Component: plasma membrane; extracellular region Molecular Function: complement component C1q binding; endopeptidase inhibitor activity Biological Process: regulation of complement activation; innate immune response; inflammatory response; complement activation, classical pathway; complement activation Disease: Complement Component 4a Deficiency; Blood Group, Chido/rodgers System
Research Articles on C4A	**1.** C4 levels were significantly lower in Factor XII-hereditary angioedema than in idiopathic non-histaminergic acquired angioedema.
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