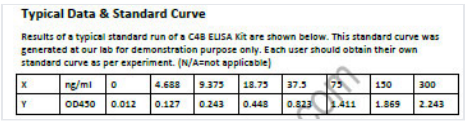
Complement C4-B (C4B) ELISA Kit for Human

PRODUCT OVERVIEW

Product Name	Complement C4-B (C4B), ELISA Kit
Full Product Name	Human Complement C4-B ELISA Kit
Product Gene Name	C4B elisa kit
Product Synonym Names	C4B/Complement C4-B/Basic complement C4/C3 and PZP-like alpha-2-macroglobulin domain-containing protein 3/C4-B/CPAMD3/C4 (Chido Blood Group)/Basic C4/CO4/CPAMD3
Species Reactivity	Human
Assay Type	Sandwich ELISA, Double Antibody
Samples	Serum, Plasma, Cell Culture Supernatant, cell or tissue lysate, Other liquid samples
Detection Range	4.688-300ng/ml
Sensitivity	2.813ng/ml
Specificity	This assay has high sensitivity and excellent specificity for detection of C4B . No significant cross-reactivity or interference between C4B and analogues was observed. Note: Limited by current skills and knowledge, it is impossible for us to complete the cross - reactivity detection between C4B and all the analogues, therefore, cross reaction may still exist.
Preparation and Storage	Store entire kit at 2-8C for short-term. For longer-term, please store the microplate & standard at -20C, while the remaining reagents can be stored at 2-8C
Inter-assay Precision	Inter-assay Precision (Precision between assays): 3 samples with low, middle and high level C4Bwere tested on 3 different plates, 8 replicates in each plate. CV (%) = SD/meanX100. Inter-Assay: CV<10%
Intra-assay Precision	Intra-assay Precision (Precision within an assay): 3 samples with low, middle and high level C4Bwere tested 20 times on one plate, respectively. Intra-Assay: CV<8%
Molecular Weight	192,751 Da
OMIM	120820
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Related Product Information for C4B elisa kit	Principle of the Assay: This kit was based on sandwich enzyme-linked immune-sorbent assay technology. Anti-C4Bantibody was pre-coated onto 96-well plates. And the biotin conjugated anti- C4B antibody was used as detection antibodies. The standards, test samples and biotin conjugated detection antibody were added to the wells subsequently, and wash with wash buffer. HRP-Streptavidin was added and unbound conjugates were washed away with wash buffer. TMB substrates were used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the C4B amount of sample captured in plate. Read the O.D. absorbance at 450nm in a microplate reader, and then the concentration of C4B can be calculated.
Other Notes	Small volumes of C4B elisa kit 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 C4B purchase	MBS765291 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Complement C4-B (C4B) ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing C4B. The ELISA analytical biochemical technique of the MBS765291 kit is based on C4B antibody-C4B antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect C4B antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, C4B. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).



Typical Data & Standard Curve

Results of a typical standard run of a C4B ELISA Kit are shown below. This standard curve was generated at our lab for demonstration purpose only. Each user should obtain their own standard curve as per experiment. (N/A=not applicable)

X	ng/ml	0	4.688	9.375	18.75	37.5	75	150	300
Y	OD450	0.012	0.127	0.243	0.448	0.823	1.411	1.869	2.243

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Typical Testing Data/Standard Curve (for reference only) of C4B elisa kit

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for C4B. It may not necessarily be applicable to this product.

NCBI GI #	178557739
NCBI GeneID	721
NCBI Accession #	NP_001002029.3
UniProt Secondary Accession #	P01028; P78445; Q13160; Q13906; Q14033; Q14835; Q6U2E9; Q6U2G1; Q6U2I5; Q6U2L1; A2BHY4
UniProt Related Accession #	P0C0L5
GenBank Nucleotide #	NM_001002029.3
NCBI Official Full Name	complement C4-B preproprotein
NCBI Official Synonym Full Names	complement component 4B (Chido blood group)
NCBI Official Symbol	C4B
NCBI Official Synonym Symbols	CH; C4F; CO4; C4B1; C4B2; C4B3; C4B5; C4BD; C4B12; C4B_2; CPAMD3
UniProt Protein Name	Complement C4-B
UniProt Synonym Protein Names	Basic complement C4; C3 and PZP-like alpha-2-macroglobulin domain-containing protein 3
Protein Family	Complement C4
UniProt Gene Name	C4B
UniProt Synonym Gene Names	CO4; CPAMD3
UniProt Entry Name	CO4B_HUMAN
NCBI Protein Information	complement C4-B
NCBI Summary for C4B	This gene encodes the basic 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 may be cleaved to release C4 anaphylatoxin, a mediator of local inflammation. Deficiency of this protein is associated with systemic lupus erythematosus. 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. In addition, this gene exists as a long form and a short form due to the presence or absence of a 6.4 kb endogenous HERV-K retrovirus in intron 9. [provided by RefSeq, Jul 2008]

UniProt Comments for C4B	C4B: 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 C4B 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. Defects in C4B are the cause of complement component 4B deficiency (C4BD). A rare defect of the complement classical pathway associated with the development of autoimmune disorders, mainly systemic lupus with or without associated glomerulonephritis. Protein type: Secreted; Secreted, signal peptide Chromosomal Location of Human Ortholog: 6p21.3 Cellular Component: extracellular region; extracellular space; plasma membrane Molecular Function: carbohydrate binding; complement binding; endopeptidase inhibitor activity Biological Process: complement activation; complement activation, classical pathway; detection of molecule of bacterial origin; inflammatory response; innate immune response; opsonization; regulation of complement activation Disease: Complement Component 4b Deficiency
Research Articles on C4B	**1.** Late antibody/C4d-mediated rejection can emerge soon after the modification of immunosuppressive drug dosages and may be responsible for graft dysfunction or loss.
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