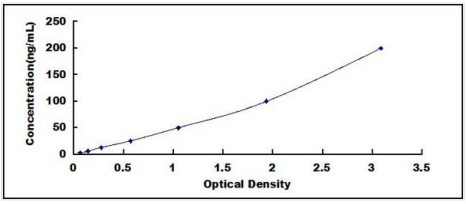
Complement Factor B (CFB) ELISA Kit for Human

PRODUCT OVERVIEW

Product Name	Complement Factor B (CFB), ELISA Kit
Full Product Name	Human Complement Factor B (CFB) Wide-range ELISA Kit
Product Gene Name	CFB elisa kit
Product Synonym Names	Complement Factor B; CF-B; BF; BFD; CFAB; GBG; H2-Bf; PBF2; B-Factor; Properdin; Properdin factor B; C3/C5 convertase; Glycine-rich beta glycoprotein
Species Reactivity	Human
Assay Type	Double-antibody Sandwich
Samples	Serum, plasma and other biological fluids
Detection Range	3.12-200ng/mL
Sensitivity	The minimum detectable dose of this kit is typically less than 1.44ng/mL
Specificity	This assay has high sensitivity and excellent specificity for detection of Wide-range Complement Factor B (CFB). No significant cross-reactivity or interference between Wide-range Complement Factor B (CFB) and analogues was observed.
Preparation and Storage	The stability of kit is determined by the loss rate of activity. The loss rate of this kit is less than 5% within the expiration date under appropriate storage condition. To minimize extra influence on the performance, operation procedures and lab conditions, especially room temperature, air humidity, incubator temperature should be strictly controlled. It is also strongly suggested that the whole assay is performed by the same operator from the beginning to the end.
OMIM	138470
3D Structure	ModBase 3D Structure for P00751
Supply Chain Verification	Manufactured in a lab with traceable raw materials. Bulk orders can typically be prepared to the customer's specifications, please inquire.
Precision	Intra-assay Precision (Precision within an assay): 3 samples with low, middle and high level Wide-range Complement Factor B (CFB) were tested 20 times on one plate, respectively. Inter-assay Precision (Precision between assays): 3 samples with low, middle and high level Wide-range Complement Factor B (CFB) were tested on 3 different plates, 8 replicates in each plate. CV(%) = SD/meanX100 Intra-Assay: CV<10% Inter-Assay: CV<12%
Test Principle	The test principle applied in this kit is Sandwich enzyme immunoassay. The microtiter plate provided in this kit has been pre-coated with an antibody specific to Wide-range Complement Factor B (CFB). Standards or samples are then added to the appropriate microtiter plate wells with a biotin-conjugated antibody specific to Wide-range Complement Factor B (CFB). Next, Avidin conjugated to Horseradish Peroxidase (HRP) is added to each microplate well and incubated. After TMB substrate solution is added, only those wells that contain Wide-range Complement Factor B (CFB), biotin-conjugated antibody and enzyme-conjugated Avidin will exhibit a change in color. The enzyme-substrate reaction is terminated by the addition of sulphuric acid solution and the color change is measured spectrophotometrically at a wavelength of 450nm +/- 10nm. The concentration of Wide-range Complement Factor B (CFB) in the samples is then determined by comparing the O.D. of the samples to the standard curve.
ISO Certification	Manufactured in an ISO 9001:2008 and ISO 13485:2003 Certified Laboratory.
Applications Tested/Suitable for CFB elisa kit	ELISA (EIA)

Related Product Information for CFB elisa kit	MBS2709306 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Complement Factor B (CFB) 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 CFB. The ELISA analytical biochemical technique of the MBS2709306 kit is based on CFB antibody-CFB antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect CFB antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, CFB. 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(%).
Other Notes	Small volumes of CFB 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.



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

ADDITIONAL DETAILS

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

NCBI GI #	67782358
NCBI GeneID	629
NCBI Accession #	NP_001701.2
UniProt Primary Accession #	P00751
UniProt Related Accession #	P00751
GenBank Nucleotide #	NP_001701.2
NCBI Official Full Name	complement factor B preproprotein
NCBI Official Synonym Full Names	complement factor B
NCBI Official Symbol	CFB
NCBI Official Synonym Symbols	BF; FB; BFD; GBG; CFAB; CFBD; PBF2; AHUS4; FBI12; H2-Bf; ARMD14
UniProt Protein Name	Complement factor B
UniProt Synonym Protein Names	C3/C5 convertase; Glycine-rich beta glycoprotein; GBG; PBF2; Properdin factor B
Protein Family	Complement factor
UniProt Gene Name	CFB
UniProt Synonym Gene Names	BF; BFD; GBG
UniProt Entry Name	CFAB_HUMAN
NCBI Protein Information	complement factor B

NCBI Summary for CFB	This gene encodes complement factor B, a component of the alternative pathway of complement activation. Factor B circulates in the blood as a single chain polypeptide. Upon activation of the alternative pathway, it is cleaved by complement factor D yielding the noncatalytic chain Ba and the catalytic subunit Bb. The active subunit Bb is a serine protease which associates with C3b to form the alternative pathway C3 convertase. Bb is involved in the proliferation of preactivated B lymphocytes, while Ba inhibits their proliferation. This gene localizes to the major histocompatibility complex (MHC) class III region on chromosome 6. This cluster includes several genes involved in regulation of the immune reaction. Polymorphisms in this gene are associated with a reduced risk of age-related macular degeneration. The polyadenylation site of this gene is 421 bp from the 5' end of the gene for complement component 2. [provided by RefSeq, Jul 2008]
UniProt Comments for CFB	CFB: Factor B which is part of the alternate pathway of the complement system is cleaved by factor D into 2 fragments: Ba and Bb. Bb, a serine protease, then combines with complement factor 3b to generate the C3 or C5 convertase. It has also been implicated in proliferation and differentiation of preactivated B- lymphocytes, rapid spreading of peripheral blood monocytes, stimulation of lymphocyte blastogenesis and lysis of erythrocytes. Ba inhibits the proliferation of preactivated B-lymphocytes. Defects in CFB are a cause of susceptibility to hemolytic uremic syndrome atypical type 4 (AHUS4). 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. Belongs to the peptidase S1 family. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Secreted, signal peptide; Secreted; Protease; EC 3.4.21.47 Chromosomal Location of Human Ortholog: 6p21.3 Cellular Component: extracellular space; extracellular region; plasma membrane Molecular Function: complement binding; serine-type endopeptidase activity Biological Process: complement activation, alternative pathway; regulation of complement activation; innate immune response; proteolysis; complement activation Disease: Macular Degeneration, Age-related, 14; Complement Factor B Deficiency; Hemolytic Uremic Syndrome, Atypical, Susceptibility To, 4
Research Articles on CFB	**1.** Serum levels of C1q, Bb, and H should be studied further as potential diagnostic markers for severe pre-eclampsia.
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