



Datasheet for ABIN5564539

C4BP ELISA Kit



[Go to Product page](#)

1 Image

Overview

Quantity:	96 tests
Target:	C4BP
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	0.938-60 ng/mL
Minimum Detection Limit:	0.938 ng/mL
Application:	ELISA

Product Details

Purpose:	The AssayMax™ Human Complement C4BP ELISA (Enzyme-Linked Immunosorbent Assay) kit is designed for detection of human complement C4BP in plasma, serum, urine, milk, saliva, CSF, and cell culture samples. This assay employs a quantitative sandwich enzyme immunoassay technique that measures human complement C4BP in less than 4 hours. A polyclonal antibody specific for human complement C4BP has been pre-coated onto a 96-well microplate with removable strips. Complement C4BP in standards and samples is sandwiched by the immobilized antibody and biotinylated polyclonal antibody specific for complement C4BP, which is recognized by a streptavidin-peroxidase conjugate. All unbound material is washed away and a peroxidase enzyme substrate is added. The color development is stopped and the intensity of the color is measured.
Brand:	AssayMax™
Sample Type:	Cell Culture Cells, Cerebrospinal Fluid, Milk, Plasma, Saliva, Serum, Urine
Analytical Method:	Quantitative

Product Details

Detection Method:	Colorimetric
Components:	Human Complement C4BP Microplate: A 96-well polystyrene microplate (12 strips of 8 wells) coated with a polyclonal antibody against human complement C4BP. Sealing Tapes: Each kit contains 3 precut, pressure sensitive sealing tapes that can be cut to fit the format of the individual assay. Human Complement C4BP Standard: Human complement C4BP in a buffered protein base (60 ng, lyophilized). Biotinylated Human Complement C4BP Antibody (50x): A 50-fold concentrated biotinylated polyclonal antibody against complement C4BP (140 l). MIX Diluent Concentrate (10x): A 10-fold concentrated buffered protein base (30 ml). Wash Buffer Concentrate (20x): A 20-fold concentrated buffered surfactant (30 ml, 2 bottles). Streptavidin-Peroxidase Conjugate (SP Conjugate): A 100-fold concentrate (80 l). Chromogen Substrate: A ready-to-use stabilized peroxidase chromogen substrate tetramethylbenzidine (8 ml). Stop Solution: A 0.5 N hydrochloric acid to stop the chromogen substrate reaction (12 ml).
Material not included:	Microplate reader capable of measuring absorbance at 405 nm. Pipettes (1-20 µL, 20-200 µL, and multiple channel). Deionized or distilled reagent grade water Incubator (37 °C)

Target Details

Target:	C4BP
Alternative Name:	Complement C4-Binding Protein (C4BP) (C4BP Products)
Background:	Complement component C4b-binding protein (C4BP) regulates the complement system by accelerating the decay of the complement component C3 convertase and by acting as a cofactor to the serine protease factor I in the degradation of C4b (1). C4BP is a high molecular mass (570 kDa) glycoprotein and is present in plasma in various isoforms with different alpha beta composition. The major form of C4BP is composed of seven identical 70- kDa alpha chains, each containing a binding site for the complement protein C4b, and a unique 45- kDa beta chain which contains a binding site for the vitamin K-dependent protein S (2). C4BP was overexpressed in the synovial membranes of patients with rheumatoid arthritis (3). It was detected in amyloid-beta plaques and on apoptotic cells (4).
Gene ID:	722
UniProt:	P04003

Application Details

Assay Time:	4 h
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Application Details

Plate:	Pre-coated
Protocol:	<ul style="list-style-type: none">• Step 1. Add 50 µL of Standard or Sample per well. Incubate 2 hours.• Step 2. Wash, then add 50 µL of Biotinylated Antibody per well. Incubate 1 hour.• Step 3. Wash, then add 50 µL of SP Conjugate per well. Incubate 30 minutes.• Step 4. Wash, then add 50 µL of Chromogen Substrate per well. Incubate 15 minutes.• Step 5. Add 50 µL of Stop Solution per well. Read at 450 nm immediately.
Reagent Preparation:	Freshly dilute all reagents and bring all reagents to room temperature before use. MIX Diluent Concentrate (10x): If crystals have formed in the concentrate, mix gently until the crystals have completely dissolved. Dilute the MIX Diluent Concentrate 1:10 with reagent grade water. Store for up to 30 days at 2-8 °C.
Sample Collection:	<p>Plasma: Collect plasma using one-tenth volume of 0.1 M sodium citrate as an anticoagulant. Centrifuge samples at 3000 x g for 10 minutes. Dilute samples 1:40000 into MIX Diluent and assay. The undiluted samples can be stored at -20 °C or below for up to 3 months. Avoid repeated freeze-thaw cycles (EDTA or Heparin can also be used as an anticoagulant). Serum: Samples should be collected into a serum separator tube. After clot formation, centrifuge samples at 3000 x g for 10 minutes and remove serum. Dilute samples 1:40000 into MIX Diluent and assay. The undiluted samples can be stored at -20 °C or below for up to 3 months. Avoid repeated freeze-thaw cycles. Urine: Collect urine using sample pot. Centrifuge samples at 800 x g for 10 minutes. Dilute samples 1:2 into MIX Diluent and assay. The undiluted samples can be stored at -20 °C or below for up to 3 months. Avoid repeated freeze-thaw cycles. Saliva: Collect saliva using sample pot. Centrifuge samples at 800 x g for 10 minutes. Dilute samples 1:80 into MIX Diluent and assay. The undiluted samples can be stored at -20 °C or below for up to 3 months. Avoid repeated freeze-thaw cycles. Cell Culture Supernatants: Centrifuge cell culture media at 3000 x g for 10 minutes to remove debris. Collect supernatants and assay. Samples can be stored at -20 °C or below. Avoid repeated freeze-thaw cycles. Milk: Collect milk using sample tube. Centrifuge samples at 800 x g for 10 minutes and assay. Milk dilution is suggested at 1:800 into MIX Diluent, however, the user should determine the optimal dilution factor. The undiluted samples can be stored at -20 °C or below for up to 3 months. Avoid repeated freeze-thaw cycles. CSF: Collect cerebrospinal fluid (CSF) using sample pot. Centrifuge samples at 3000 x g for 10 minutes. Dilute samples 1:20 into MIX Diluent and assay. The undiluted samples can be stored at -80 °C for up to 3 months. Avoid repeated freeze-thaw cycles. 8</p>
Assay Procedure:	Prepare all reagents, standard solutions, and samples as instructed. Bring all reagents to room temperature before use. The assay is performed at room temperature (20-25 °C). 5 Remove excess microplate strips from the plate frame and return them immediately to the foil pouch

with desiccants inside. Reseal the pouch securely to minimize exposure to water vapor and store in a vacuum desiccator. Add 50 l of Human Complement C4BP Standard or sample per well. Cover wells with a sealing tape and incubate for 2 hours. Start the timer after the last addition. Wash five times with 200 l of Wash Buffer manually. Invert the plate each time and decant the contents, hit 4-5 times on absorbent material to completely remove the liquid. If using a machine, wash six times with 300 l of Wash Buffer and then invert the plate, decanting the contents, hit 4-5 times on absorbent material to completely remove the liquid. Add 50 l of Biotinylated Human Complement C4BP Antibody to each well and incubate for 1 hour. Wash the microplate as described above. Add 50 l of Streptavidin-Peroxidase Conjugate to each well and incubate for 30 minutes. Turn on the microplate reader and set up the program in advance. Wash the microplate as described above. Add 50 l of Chromogen Substrate per well and incubate for 15 minutes or till the optimal blue color density develops. Gently tap plate to ensure thorough mixing and break the bubbles in the well with pipette tip. Add 50 l of Stop Solution to each well. The color will change from blue to yellow. Read the absorbance on the microplate reader at a wavelength of 450 nm immediately. If wavelength correction is available, subtract readings at 570 nm from those at 450 nm to correct optical imperfections. Otherwise, read the plate at 450 nm only. Please note that some unstable black particles may be generated at high concentration points after stopping the reaction for about 10 minutes, which will reduce the readings.

Calculation of Results:

- Calculate the mean value of the duplicate or triplicate readings for each standard and sample.
- To generate a standard curve, plot the graph using the standard concentrations on the x-axis and the corresponding mean 450 nm absorbance (OD) on the y-axis. The best-fit line can be determined by regression analysis using log-log or four-parameter logistic curve-fit.
- Determine the unknown sample concentration from the standard curve and multiply the value by the dilution factor.

Restrictions:

For Research Use only

Handling

Handling Advice:

This product is for Research Use Only and is not intended for use in diagnostic procedures. Prepare all reagents (working diluent buffer, wash buffer, standard, biotinylated antibody, and SP conjugate) as instructed, prior to running the assay. Human Complement C4-Binding Protein (C4BP) ELISA Kit Catalog No. EC2202-1 Sample insert for reference use only 8 Prepare all samples prior to running the assay. The dilution factors for the samples are suggested in this insert. However, the user should determine the optimal dilution factor. Spin down the SP

Handling

conjugate vial and the biotinylated antibody vial before opening and using contents. The Stop Solution is an acidic solution. The kit should not be used beyond the expiration date.

Storage: 4 °C, -20 °C

Storage Comment: Upon arrival, immediately store components of the kit at recommended temperatures up to the expiration date. Store SP Conjugate and Biotinylated Antibody at -20°C. Store Microplate, Diluent Concentrate (10x), Wash Buffer, Stop Solution, and Chromogen Substrate at 2-8°C. Unused microplate wells may be returned to the foil pouch with the desiccant packs and resealed. May be stored for up to 30 days in a vacuum desiccator. Diluent (1x) may be stored for up to 30 days at 2-8°C. 3 Store Standard at 2-8°C before reconstituting with Diluent and at -20°C after reconstituting with Diluent.

Images

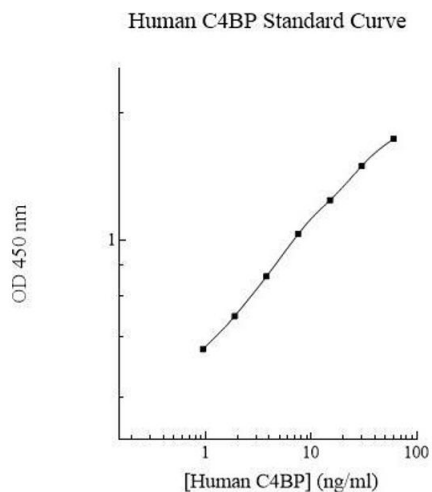


Image 1.