**Product datasheet**

**Human Complement factor H ELISA Kit ab252359**

SimpleStep ELISA®

5 Images

### Overview

**Product name**
Human Complement factor H ELISA Kit

**Detection method**
Colorimetric

**Precision**

<table>
<thead>
<tr>
<th>Sample</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>CV%</th>
</tr>
</thead>
<tbody>
<tr>
<td>serum</td>
<td>8</td>
<td></td>
<td></td>
<td>2.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sample</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>CV%</th>
</tr>
</thead>
<tbody>
<tr>
<td>serum</td>
<td>3</td>
<td></td>
<td></td>
<td>5.8%</td>
</tr>
</tbody>
</table>

**Sample type**
Cell culture supernatant, Saliva, Serum, Hep Plasma, EDTA Plasma, Cit plasma

**Assay type**
Sandwich (quantitative)

**Sensitivity**
74 pg/ml

**Range**
156.25 pg/ml - 10000 pg/ml

**Recovery**

<table>
<thead>
<tr>
<th>Sample type</th>
<th>Average %</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cell culture supernatant</td>
<td>106</td>
<td>102% - 113%</td>
</tr>
<tr>
<td>Saliva</td>
<td>103</td>
<td>97% - 110%</td>
</tr>
<tr>
<td>Serum</td>
<td>106</td>
<td>101% - 113%</td>
</tr>
<tr>
<td>Hep Plasma</td>
<td>110</td>
<td>104% - 113%</td>
</tr>
<tr>
<td>EDTA Plasma</td>
<td>105</td>
<td>100% - 110%</td>
</tr>
<tr>
<td>Cit plasma</td>
<td>115</td>
<td>113% - 119%</td>
</tr>
</tbody>
</table>
Assay time 1h 30m
Assay duration One step assay
Species reactivity **Reacts with:** Human
**Does not react with:** Cow

**Product overview**
Human Complement factor H ELISA Kit (ab252359) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of Complement factor H protein in cell culture supernatant, cit plasma, edta plasma, hep plasma, saliva, and serum. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human Complement factor H with 74 pg/ml sensitivity.

SimpleStep ELISA® technology employs capture antibodies conjugated to an affinity tag that is recognized by the monoclonal antibody used to coat our SimpleStep ELISA® plates. This approach to sandwich ELISA allows the formation of the antibody-analyte sandwich complex in a single step, significantly reducing assay time. See the SimpleStep ELISA® protocol summary in the image section for further details. Our SimpleStep ELISA® technology provides several benefits:

- Single-wash protocol reduces assay time to 90 minutes or less
- High sensitivity, specificity and reproducibility from superior antibodies
- Fully validated in biological samples
- 96-wells plate breakable into 12 x 8 wells strips

A 384-well SimpleStep ELISA® microplate (ab203359) is available to use as an alternative to the 96-well microplate provided with SimpleStep ELISA® kits.

**Platform**
Pre-coated microplate (12 x 8 well strips)

**Properties**

**Storage instructions**
Store at +4°C. Please refer to protocols.

<table>
<thead>
<tr>
<th>Components</th>
<th>1 x 96 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>10X Human Complement factor H Capture Antibody</td>
<td>1 x 600µl</td>
</tr>
<tr>
<td>10X Human Complement factor H Detector Antibody</td>
<td>1 x 600µl</td>
</tr>
<tr>
<td>10X Wash Buffer PT (ab206977)</td>
<td>1 x 20ml</td>
</tr>
<tr>
<td>Antibody Diluent 5BI</td>
<td>1 x 6ml</td>
</tr>
<tr>
<td>Human Complement factor H Lyophilized Purified Protein</td>
<td>2 vials</td>
</tr>
<tr>
<td>Plate Seals</td>
<td>1 unit</td>
</tr>
<tr>
<td>Sample Diluent NS (ab193972)</td>
<td>1 x 50ml</td>
</tr>
<tr>
<td>SimpleStep Pre-Coated 96-Well Microplate (ab206978)</td>
<td>1 unit</td>
</tr>
</tbody>
</table>
**Function**  
Factor H functions as a cofactor in the inactivation of C3b by factor I and also increases the rate of dissociation of the C3bBb complex (C3 convertase) and the (C3b)NBB complex (C5 convertase) in the alternative complement pathway.

**Tissue specificity**  
Expressed by the liver and secreted in plasma.

**Involvement in disease**  
Genetic variations in CFH are associated with basal laminar drusen (BLD) [MIM:126700]; also known as drusen of Bruch membrane or cuticular drusen or grouped early adult-onset drusen. Drusen are extracellular deposits that accumulate below the retinal pigment epithelium on Bruch membrane. Basal laminar drusen refers to an early adult-onset drusen phenotype that shows a pattern of uniform small, slightly raised yellow subretinal nodules randomly scattered in the macula. In later stages, these drusen often become more numerous, with clustered groups of drusen scattered throughout the retina. In time these small basal laminar drusen may expand and ultimately lead to a serous pigment epithelial detachment of the macula that may result in vision loss.

Defects in CFH are the cause of complement factor H deficiency (CFH deficiency) [MIM:609814]. CFH deficiency determines uncontrolled activation of the alternative complement pathway with consumption of C3 and often other terminal complement components. It is associated with a number of renal diseases with variable clinical presentation and progression, including membranoproliferative glomerulonephritis and atypical hemolytic uremic syndrome. CFH deficiency patients may show increased susceptibility to meningococcal infections.

Defects in CFH are a cause of susceptibility to hemolytic uremic syndrome atypical type 1 (AHUS1) [MIM:235400]. 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. Note= 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.

Genetic variation in CFH is associated with age-related macular degeneration type 4 (ARMD4) [MIM:610698]. 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 (known as drusen) that lie beneath the retinal pigment epithelium and within an elastin-containing structure known as Bruch membrane.

**Sequence similarities**  
Contains 20 Sushi (CCP/SCR) domains.

**Cellular localization**  
Secreted.

### Components

<table>
<thead>
<tr>
<th>Component</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop Solution</td>
<td>1 x 12ml</td>
</tr>
<tr>
<td>TMB Development Solution</td>
<td>1 x 12ml</td>
</tr>
</tbody>
</table>

### Images
SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.

The Complement Factor H standard curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.

The concentrations of Complement Factor H were measured in duplicates, interpolated from the Complement Factor H standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 1:50,000, plasma (citrate) 1:50,00, plasma (EDTA) 1:50,000, and plasma (heparin) 1:50,000. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean Complement Factor H concentration was determined to be 268 µg/mL in serum, 247 µg/mL in plasma (citrate), 231 µg/mL in plasma (EDTA), and 187 µg/mL in plasma (heparin).
The concentrations of Complement Factor H were measured in duplicates, interpolated from the Complement Factor H standard curves and corrected for sample dilution. Undiluted samples are as follows: saliva, 2.5% and A549 cell culture supernatant, 25%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean Complement Factor H concentration was determined to be 179 ng/mL in saliva and 31 ng/mL in A549 cell culture supernatant.

Serum from ten individual healthy human male donors was measured in duplicate. Interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean Complement Factor H concentration was determined to be 288 µg/mL with a range of 156.1 – 466.5 µg/mL.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support
- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards
If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit https://www.abcam.com/abpromise or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors