Product datasheet

Anti-Factor H antibody ab8842

Overview

Product name Anti-Factor H antibody
Description Sheep polyclonal to Factor H
Host species Sheep
Tested applications Suitable for: WB, IHC-P, Double Immunodiffusion, RID, Immunoelectrophoresis, Other, ELISA
Species reactivity Reacts with: Mouse, Rat, Horse, Guinea pig, Cat, Dog, Human
Does not react with: Rabbit, Chicken, Pig
Immunogen Human 155 kDa Factor H purified from plasma.
General notes Factor H is mainly synthesised in the liver but also in macrophages and endothelium. It is primarily a plasma glycoprotein but is also found in platelets and there is a membrane bound form on some leukocytes. Consisting of a single polypeptide, the major form of Factor H has a molecular weight of 155kDa. There are two truncated forms, a non-glycosylated 49 kDa form and a glycosylated 39-43 kDa form. Plasma concentrations are in the range 200-600mg/L for the 155 kDa form and 1-5mg/L for the truncated forms. Factor H is a major regulatory protein of the complement system. By binding to C3b it either displaces or prevents the binding of Bb (activated Factor B). When bound to Factor H, C3b is susceptible to cleavage by Factor 1 to yield iC3b. Factor H is released or modified following this cleavage. The regulatory role of Factor H is essential because C3bBb is not only a C5 convertase but a C3 convertase and so has a positive feedback effect, potentially consuming the entire C3 pool if unregulated.

Properties

Form Liquid
Storage instructions Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer pH: 7.40
Preservative: 0.1% Sodium azide
Constituents: 0.1% EACA, 0.01% Benzamidine, 0.0292% EDTA
Purity IgG fraction
Purification notes Antiserum is prepared by immunisation of sheep with human Factor H and, if necessary, adsorption to monospecificity by use of solid-phase adsorbents. An immunoglobulin fraction is then produced. The titre is adjusted so that inter-batch variation is within 10%. The product is
finally 0.2µm filtered.

Primary antibody notes

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Clonality
Polyclonal

Myeloma
unknown

Isotype
IgG

Light chain type
unknown

Applications

Our Abpromise guarantee covers the use of ab8842 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tbody>
<tr>
<td>WB</td>
<td>Use at an assay dependent concentration. PubMed: 20813971</td>
<td>Suitability for use in nephelometry and enzyme-linked immunosorbent assays have not been assessed but use in such assays should not necessarily be excluded.</td>
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<tr>
<td>IHC-P</td>
<td>Use at an assay dependent concentration. PubMed: 20813971</td>
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<tr>
<td>Double Immunodiffusion</td>
<td>Use at an assay dependent concentration. 10µL antiserum vs 10µL plasma</td>
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<tr>
<td>RID</td>
<td>Use at an assay dependent concentration. (and Rocket IEP) 1µL antiserum/cm² gel vs 5µL neat - 1/10 dilution human plasma.</td>
<td>The use of 3% PEG 6000 with 1.2% agarose in a suitable buffer (such as TBE or Tris-barbital pH &gt;8.2) is recommended.</td>
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<tr>
<td>Immunelectrophoresis</td>
<td>Use at an assay dependent concentration. 100µL antiserum vs 5µL plasma</td>
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<tr>
<td>Other</td>
<td>Use at an assay dependent concentration.</td>
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<tr>
<td>ELISA</td>
<td>Use at an assay dependent concentration. PubMed: 22461909</td>
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Target

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.

**Images**

**All lanes** : Anti-Factor H antibody (ab8842) at 1/500 dilution

- **Lane 1** : Purified Human Factor H
- **Lane 2** : Human serum sample (albumin depleted)
- **Lane 3** : Mouse serum sample (albumin depleted)
- **Lane 4** : Rat serum sample (albumin depleted)
- **Lane 5** : Guinea pig serum sample (albumin depleted)
- **Lane 6** : Cattle serum sample (albumin depleted)
- **Lane 7** : Horse serum sample (albumin depleted)
- **Lane 8** : Dog serum sample (albumin depleted)
- **Lane 9** : Cat serum sample (albumin depleted)
Developed using the ECL technique.

Performed under non-reducing conditions.

Samples were fractionated by non-reducing SDS-PAGE (10 µg/well/animal species) and transferred to nitrocellulose membranes. Membranes were blocked overnight at 4°C in SuperBlock buffer and then incubated for 2 hours (37°C with shaking) with ab8842 diluted in TTBS buffer [10 mM Tris/HCl (pH 8.3), 0.05% Tween-20 and 150 mM NaCl] with 1% skim milk. Membranes were washed 3 times with TTBS, incubated with rabbit anti-sheep HRPO antibody diluted to 1/400,000 in TTBS with 1% skim milk for 1 hour (37°C with shaking) and then washed 3 times.

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

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