

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Complement Factor H in direct ELISAs and Western blots. In direct ELISAs, less than 5% cross-reactivity with recombinant human Complement Factor H is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Complement Factor H Ser875-Val1252 Accession # NP_034018
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

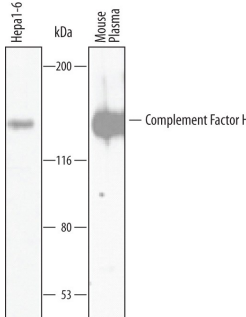
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Simple Western	10 µg/mL	See Below

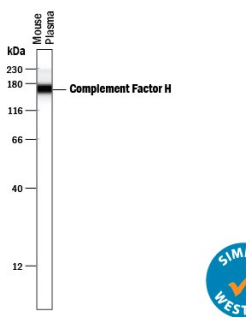
DATA

Western Blot




Detection of Mouse Complement Factor H by Western Blot. Western blot shows lysates of Hepa 1-6 mouse hepatoma cell line and mouse plasma. PVDF membrane was probed with 1 µg/mL of Sheep Anti-Mouse Complement Factor H Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4999) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Complement Factor H at approximately 150 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Simple Western



Detection of Mouse Complement Factor H by Simple Western™. Simple Western lane view shows mouse plasma, loaded at 0.2 mg/mL. A specific band was detected for Complement Factor H at approximately 166 kDa (as indicated) using 10 µg/mL of Sheep Anti-Mouse Complement Factor H Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4999) followed by 1:50 dilution of HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Factor H is a 155 kDa glycoprotein that provides critical negative regulation of the alternative pathway complement cascade. It is secreted by Kupffer cells, hepatocytes, vascular endothelial cells, and platelets and circulates in the serum at high concentration (1). Factor H is composed of 20 SCR (short consensus repeats), each of which consists of approximately 60 amino acids with four invariant Cys residues (2). Factor H interacts with cell surface polyanions including heparin and sialoglycoproteins (3-6), and immobilized Factor H supports the CD11b/CD18 integrin-dependent adhesion of neutrophils (7). It prevents local complement activation by sequestering complement component C3b, accelerating the decay of C3 and C5 convertases, and functioning as a cofactor for the C3b inactivator, Factor I (1, 3, 6, 8). This recombinant protein corresponds to SCR15-20 which encompass the primary binding sites for heparin and C3b as well as for the peptide hormone adrenomedullin (4, 9-11). Within SCR15-20, mouse Factor H shares 60% and 80% amino acid sequence identity with human and rat Factor H, respectively. Dozens of mutations clustered in SCR15-20 are associated with atypical hemolytic uremic syndrome, a disorder characterized by anemia, thrombocytopenia, and renal failure (12). Binding of Factor H to tumor cell-associated dentin matrix protein 1, bone sialoprotein, or osteopontin results in the protection of that cell from complement mediated lysis (13, 14). A variety of pathogenic microbes also express Factor H binding molecules that interfere with immune clearance of the infection (15).

References:

1. Schmidt, C.Q. *et al.* (2008) *Clin. Exp. Immunol.* **151**:14.
2. Kristensen, T. and B.F. Tack (1986) *Proc. Natl. Acad. Sci.* **83**:3963.
3. Meri, S. and M.K. Pangburn (1990) *Proc. Natl. Acad. Sci.* **87**:3982.
4. Jokiranta, T.S. *et al.* (2005) *Am. J. Pathol.* **167**:1173.
5. Blackmore, T.K. *et al.* (1998) *J. Immunol.* **160**:3342.
6. Hellwage, J. *et al.* (2002) *J. Immunol.* **169**:6935.
7. DiScipio, R.G. *et al.* (1998) *J. Immunol.* **160**:4057.
8. Sharma, A.K. and M.K. Pangburn (1996) *Proc. Natl. Acad. Sci.* **93**:10996.
9. Oppermann, M. *et al.* (2006) *Clin. Exp. Immunol.* **144**:342.
10. Pangburn, M.K. *et al.* (2000) *J. Immunol.* **164**:4742.
11. Martinez, A. *et al.* (2003) *Hypertens. Res.* **26**:S55.
12. de Cordoba, S.R. and E.G. de Jorge (2008) *Clin. Exp. Immunol.* **151**:1.
13. Jain, A. *et al.* (2002) *J. Biol. Chem.* **277**:13700.
14. Fedarko, N.S. *et al.* (2000) *J. Biol. Chem.* **275**:16666.
15. Kraiczy, P. and R. Wurzner (2006) *Mol. Immunol.* **43**:31.