

Factor H (L20/3): sc-47686

BACKGROUND

The Factor H gene family is a multidomain, multifunctional protein family whose individual members are defined by conserved structural elements, which display diverse yet often overlapping functions. These proteins share a common structural motif, the short consensus repeat (SCR), which is structurally conserved among related genes and between phylogenetically divergent species. The human complement Factor H (FH, CFH, HUS, β -1H) gene encodes a 1,213 amino acid serum glycoprotein which is arranged into 20 SCRs, each approximately 60 amino acids long, and an 18-residue leader sequence. Factor H controls the function of the alternative complement pathway and acts as a cofactor with Factor I (C3b inactivator). In addition, Factor H has functional activity outside of the complement system, where it can bind to the cellular integrin receptor (CD11b/CD18), interact with cell surface glycosaminoglycans and associate with the surface of certain pathogenic microorganisms. Deficiencies in Factor H is a common characteristic of acute renal disease.

REFERENCES

1. Sim, E. et al. 1983. Monoclonal antibodies against the complement control protein Factor H (β 1 H). *Biosci. Rep.* 3: 1119-1131.
2. Ripoche, J., et al. 1988. The complete amino acid sequence of human complement Factor H. *Biochem. J.* 249: 593-602.

CHROMOSOMAL LOCATION

Genetic locus: CFH (human) mapping to 1q31.3.

SOURCE

Factor H (L20/3) is a mouse monoclonal antibody raised against complement protein Factor H purified from human serum.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

Factor H (L20/3) is recommended for detection of Factor H of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Factor H siRNA (h): sc-42877, Factor H shRNA Plasmid (h): sc-42877-SH and Factor H shRNA (h) Lentiviral Particles: sc-42877-V.

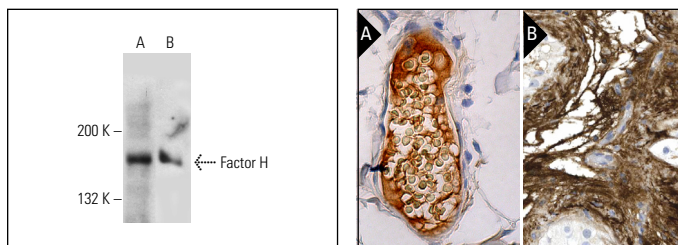
Molecular Weight of Factor H: 150 kDa.

Positive Controls: human PBL whole cell lysate or human plasma extract: sc-364374.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Factor H (L20/3): sc-47686. Western blot analysis of Factor H expression in human PBL whole cell lysate (A) and human recombinant Factor H (B).


Factor H (L20/3): sc-47686. Immunoperoxidase staining of formalin fixed, paraffin-embedded human blood vessel showing plasma staining (A) and human testis tissue showing cytoplasmic and membrane staining of Leydig cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

SELECT PRODUCT CITATIONS

1. Shao, C., et al. 2009. Shotgun proteomic analysis of hibernating arctic ground squirrels. *Mol. Cell. Proteomics* 9: 313-326.
2. Scambi, C., et al. 2010. Comparative proteomic analysis of serum from patients with systemic sclerosis and sclerodermatous GVHD. Evidence of defective function of Factor H. *PLoS ONE* 5: e12162.
3. Blanc, C., et al. 2012. Overall neutralization of complement Factor H by autoantibodies in the acute phase of the autoimmune form of atypical hemolytic uremic syndrome. *J. Immunol.* 189: 3528-3537.
4. Smolag, K.I., et al. 2020. Complement inhibitor factor H expressed by breast cancer cells differentiates CD14⁺ human monocytes into immunosuppressive macrophages. *Oncoimmunology* 9: 1731135.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.



See **Factor H (C18/3): sc-47685** for Factor H antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.