

# Factor H (M-300): sc-33157

## 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, b-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., Palmer, M.S., Puklavec, M. and Sim, R.B. 1983. Monoclonal antibodies against the complement control protein factor H ( $\beta$ 1 H). *Biosci. Rep.* 3: 1119-1131.
2. Ripoché, J., Day, A.J., Harris, T.J. and Sim, R.B. 1988. The complete amino acid sequence of human complement Factor H. *Biochem. J.* 249: 593-602.
3. Munoz-Canoves, P. Tack, B.F. and Vik, D.P. 1989. Analysis of complement Factor H mRNA expression: dexamethasone and IFN- $\gamma$  increase the level of H in L cells. *Biochemistry* 28: 9891-9897.
4. Rougier, N., Kazatchkine, M.D., Rougier, J.P., Fremeaux-Bacchi, V., Blouin, J., Deschenes, G., Soto, B., Baudouin, V., Pautard, B., Proesmans, W., Weiss, E. and Weiss, L. 1998. Human complement Factor H deficiency associated with hemolytic uremic syndrome. *J. Am. Soc. Nephrol.* 9: 2318-2326.
5. Zipfel, P.F., Jokiranta, T.S., Hellwege, J., Koistinen, V. and Meri, S. 1999. The factor H protein family. *Immunobiology* 42: 53-60.
6. Male, D.A., Ormsby, R.J., Ranganathan, S., Giannakis, E. and Gordon, D.L. 2000. Complement Factor H: sequence analysis of 221 kb of human genomic DNA containing the entire fH, fHR-1 and fHR-3 genes. *Mol. Immunol.* 37: 41-52.
7. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 134370: World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: CFH (human) mapping to 1q32; Cfh (mouse) mapping to 1 F.

## SOURCE

Factor H (M-300) is a rabbit polyclonal antibody raised against amino acids 61-360 mapping within an internal region of Factor H of mouse origin.

## RESEARCH USE

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

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Factor H (M-300) is recommended for detection of Factor H of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2  $\mu$ g per 100–500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Factor H siRNA (h): sc-42877 and Factor H siRNA (m): sc-42878.

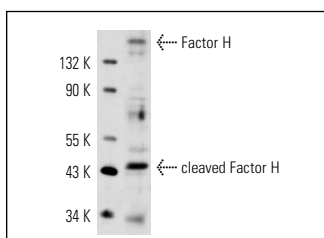
Molecular Weight of Factor H: 150 kDa.

Positive Controls: mouse liver extract: sc-2256.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

## DATA



Factor H (M-300): sc-33157. Western blot analysis of Factor H expression in mouse liver tissue extract.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.