SANTA CRUZ BIOTECHNOLOGY, INC.

Factor H (I-20): sc-17951

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

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. Ripoche, J., et al. 1988. The complete amino acid sequence of human complement factor H. Biochem. J. 249: 593-602.
2. Rougier, N., et al. 1998. Human complement factor H deficiency associated with hemolytic uremic syndrome. J. Am. Soc. Nephrol. 9: 2318-2326.
3. Zipfel, P.F., et al. 1999. The factor H protein family. Immunopharmacology 42: 53-60.

CHROMOSOMAL LOCATION

Genetic locus: Cfh (mouse) mapping to 1 F.

SOURCE

Factor H (I-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Factor H of mouse origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-17951 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

Factor H (I-20) is recommended for detection of Factor H of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 (m): sc-42878, Factor H shRNA Plasmid (m): sc-42878-SH and Factor H shRNA (m) Lentiviral Particles: sc-42878-V.

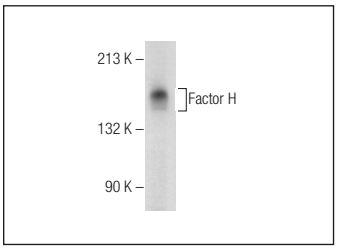
Molecular Weight of Factor H: 150 kDa.

Positive Controls: mouse liver extract: sc-2256 or rat liver extract: sc-2395.

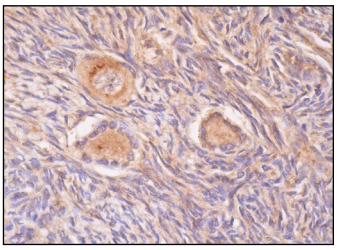
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Factor H (I-20): sc-17951. Western blot analysis of Factor H expression in rat liver tissue extract.



Factor H (I-20): sc-17951. Immunoperoxidase staining of formalin fixed, paraffin-embedded human ovary tissue showing cytoplasmic staining of ovarian stroma cells, endothelial cells and plasma cells.

SELECT PRODUCT CITATIONS

1. Bora, N.S., et al. 2006. Complement activation via alternative pathway is critical in the development of laser-induced choroidal neovascularization: role of Factor B and Factor H. J. Immunol. 177: 1872-1878.
2. Korbelik, M., et al. 2008. Complement activation cascade and its regulation: relevance for the response of solid tumors to photodynamic therapy. J. Photochem. Photobiol. B, Biol. 93: 53-59.
3. Ma, W., et al. 2013. A2E accumulation influences retinal microglial activation and complement regulation. Neurobiol. Aging 34: 943-960.