SANTA CRUZ BIOTECHNOLOGY, INC.

Factor H (C18/3): sc-47685

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.

CHROMOSOMAL LOCATION

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

SOURCE

Factor H (C18/3) is a mouse monoclonal antibody raised against complement protein factor H purified from human serum.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Factor H (C18/3) is available conjugated to agarose (sc-47685 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-47685 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-47685 PE), fluorescein (sc-47685 FITC), Alexa Fluor® 488 (sc-47685 AF488), Alexa Fluor® 546 (sc-47685 AF546), Alexa Fluor® 594 (sc-47685 AF594) or Alexa Fluor® 647 (sc-47685 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-47685 AF680) or Alexa Fluor® 790 (sc-47685 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Factor H (C18/3) is recommended for detection of Factor H of human origin by Western Blotting (starting dilution 1:100, 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) 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.

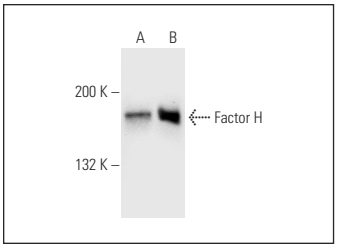
Molecular Weight of Factor H: 150 kDa.

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

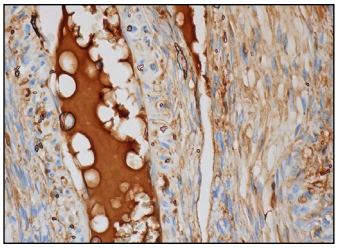
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Factor H (C18/3): sc-47685. Western blot analysis of Factor H expression in human PBL whole cell lysate (**A**) and human recombinant Factor H (**B**).



Factor H (C18/3): sc-47685. Immunoperoxidase staining of formalin fixed, paraffin-embedded human ovary tissue showing cytoplasmic staining of ovarian stroma cells and staining of plasma in blood vessels.

SELECT PRODUCT CITATIONS

1. Moore, I., et al. 2010. Association of Factor H autoantibodies with deletions of CFHR1, CFHR3, CFHR4, and with mutations in CFH, CFI, CD46, and C3 in patients with atypical hemolytic uremic syndrome. Blood 115: 379-387.
2. Foltyn Zadura, A., et al. 2012. Factor H autoantibodies and deletion of complement Factor H-related protein-1 in rheumatic diseases in comparison to atypical hemolytic uremic syndrome. Arthritis Res. Ther. 14: R185.
3. Akesson, A., et al. 2017. Indications of underdiagnosis of atypical hemolytic uremic syndrome in a cohort referred to the coagulation unit in Malmo, Sweden, for analysis of ADAMTS13 2007-2012. Nephrology 22: 555-561.
4. Merle, D.A., et al. 2021. mTOR inhibition via rapamycin treatment partially reverts the deficit in energy metabolism caused by FH loss in RPE cells. Antioxidants 10: 1944.

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 for detailed protocols and support products.