SANTA CRUZ BIOTECHNOLOGY, INC.

Factor H (H-5): sc-166608

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 (H-5) is a mouse monoclonal antibody raised against amino acids 61-360 mapping within an internal region of Factor H of human origin.

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 (H-5) is available conjugated to agarose (sc-166608 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-166608 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166608 PE), fluorescein (sc-166608 FITC), Alexa Fluor® 488 (sc-166608 AF488), Alexa Fluor® 546 (sc-166608 AF546), Alexa Fluor® 594 (sc-166608 AF594) or Alexa Fluor® 647 (sc-166608 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166608 AF680) or Alexa Fluor® 790 (sc-166608 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Factor H (H-5) 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 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, Factor H shRNA Plasmid (h): sc-42877-SH and Factor H shRNA (h) Lentiviral Particles: sc-42877-V.

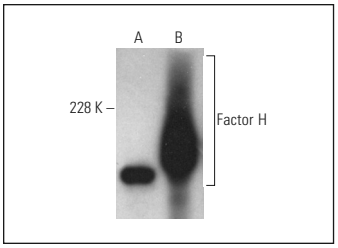
Molecular Weight of Factor H: 150 kDa.

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

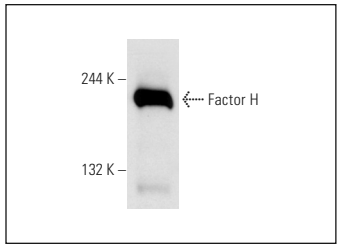
RECOMMENDED SUPPORT REAGENTS

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) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Factor H (H-5) HRP: sc-166608 HRP. Direct western blot analysis of Factor H expression in mouse liver tissue extract (**A**) and human plasma (**B**).



Factor H (H-5): sc-166608. Western blot analysis of Factor H expression in human PBL whole cell lysate.

SELECT PRODUCT CITATIONS

1. Hill, J.M., et al. 2009. HSV-1 infection of human brain cells induces miRNA-146a and Alzheimer-type inflammatory signaling. Neuroreport 20: 1500-1505.
2. Alexandrov, P.N., et al. 2011. Retinal amyloid peptides and complement Factor H in transgenic models of Alzheimer's disease. Neuroreport 22: 623-627.
3. Li, Y.Y., et al. 2012. miRNA-155 upregulation and complement Factor H deficits in Down's syndrome. Neuroreport 23: 168-173.
4. Lukiw, W.J., et al. 2012. Spreading of Alzheimer's disease inflammatory signaling through soluble micro-RNA. Neuroreport 23: 621-626.
5. Armento, A., et al. 2020. Loss of complement Factor H impairs antioxidant capacity and energy metabolism of human RPE cells. Sci. Rep. 10: 10320.
6. Armento, A., et al. 2021. CFH loss in human RPE cells leads to inflammation and complement system dysregulation via the NFκB pathway. Int. J. Mol. Sci. 22: 8727.

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.