

Factor H (H-7): sc-166613

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; Cfh (mouse) mapping to 1 F.

SOURCE

Factor H (H-7) 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 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Factor H (H-7) is available conjugated to agarose (sc-166613 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166613 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166613 PE), fluorescein (sc-166613 FITC), Alexa Fluor[®] 488 (sc-166613 AF488), Alexa Fluor[®] 546 (sc-166613 AF546), Alexa Fluor[®] 594 (sc-166613 AF594) or Alexa Fluor[®] 647 (sc-166613 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-166613 AF680) or Alexa Fluor[®] 790 (sc-166613 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Factor H (H-7) is recommended for detection of Factor H of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 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 siRNA (m): sc-42878, Factor H shRNA Plasmid (h): sc-42877-SH, Factor H shRNA Plasmid (m): sc-42878-SH, Factor H shRNA (h) Lentiviral Particles: sc-42877-V and Factor H shRNA (m) Lentiviral Particles: sc-42878-V.

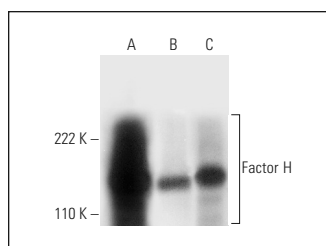
Molecular Weight of Factor H: 150 kDa.

Positive Controls: human liver extract: sc-363766, human plasma extract: sc-364374 or human kidney extract: sc-363764.

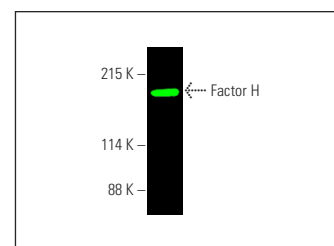
RECOMMENDED SUPPORT REAGENTS

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.

DATA



Factor H (H-7): sc-166613. Western blot analysis of Factor H in human plasma (A) and Factor H expression in human liver (B) and human kidney (C) tissue extracts.



Factor H (H-7) Alexa Fluor[®] 680: sc-166613 AF680. Direct near-infrared western blot analysis of Factor H in human plasma. Blocked with UltraCruz[®] Blocking Reagent: sc-516214.

SELECT PRODUCT CITATIONS

- Alexandrov, P.N., et al. 2011. Retinal amyloid peptides and complement Factor H in transgenic models of Alzheimer's disease. *Neuroreport* 22: 623-627.
- Li, Y.Y., et al. 2012. miRNA-155 upregulation and complement Factor H deficits in Down's syndrome. *Neuroreport* 23: 168-173.
- Lukiw, W.J., et al. 2012. Spreading of Alzheimer's disease inflammatory signaling through soluble micro-RNA. *Neuroreport* 23: 621-626.
- Popek, S., et al. 2016. IL-6 and IL-8 enhance Factor H binding to the cell membranes. *Mol. Med. Rep.* 13: 3886-3894.
- Shahulhameed, S., et al. 2020. A systematic investigation on complement pathway activation in diabetic retinopathy. *Front. Immunol.* 11: 154.

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.

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