10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

CFH Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP10942c

Product Information

Application	WB, IHC-P, IF, E
Primary Accession	P08603
Other Accession	NP_000177.2
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB18698
Calculated MW	139096
Antigen Region	751-780

Additional Information

Gene ID	3075
Other Names	Complement factor H, H factor 1, CFH, HF, HF1, HF2
Target/Specificity	This CFH antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 751-780 amino acids of human CFH.
Dilution	WB~~1:1000 IHC-P~~1:100~500 IF~~1:25 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CFH Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CFH
Synonyms	HF, HF1, HF2
Function	Glycoprotein that plays an essential role in maintaining a well-balanced immune response by modulating complement activation. Acts as a soluble

inhibitor of complement, where its binding to self markers such as glycan structures prevents complement activation and amplification on cell surfaces (PubMed:21285368, PubMed:21317894, PubMed:25402769). Accelerates the decay of the complement alternative pathway (AP) C3 convertase C3bBb, thus preventing local formation of more C3b, the central player of the complement amplification loop (PubMed:19503104, PubMed:21317894, PubMed:26700768). As a cofactor of the serine protease factor I, CFH also regulates proteolytic degradation of already-deposited C3b (PubMed:18252712, PubMed:23332154, PubMed:28671664). In addition, mediates several cellular responses through interaction with specific receptors. For example, interacts with CR3/ITGAM receptor and thereby mediates the adhesion of human neutrophils to different pathogens. In turn, these pathogens are phagocytosed and destroyed (PubMed:20008295, PubMed:9558116).

Cellular Location Secreted.

Tissue Location Expressed in the retinal pigment epithelium (at protein level) (PubMed:25136834). CFH is one of the most abundant complement components in blood where the liver is the major source of CFH protein in vivo. in addition, CFH is secreted by additional cell types including monocytes, fibroblasts, or endothelial cells (PubMed:2139673, PubMed:25136834, PubMed:2968404, PubMed:6444659)

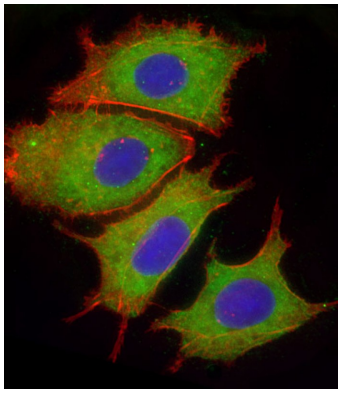
Background

This gene is a member of the Regulator of Complement Activation (RCA) gene cluster and encodes a protein with twenty short concensus repeat (SCR) domains. This protein is secreted into the bloodstream and has an essential role in the regulation of complement activation, restricting this innate defense mechanism to microbial infections. Mutations in this gene have been associated with hemolytic-uremic syndrome (HUS) and chronic hypocomplementemic nephropathy. Alternate transcriptional splice variants, encoding different isoforms, have been characterized.

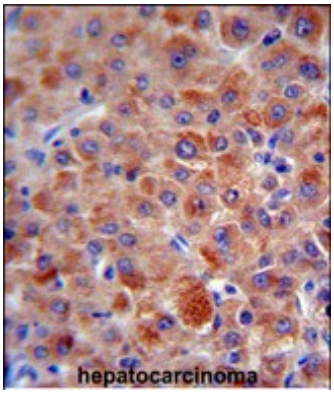
References

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Sofat, R., et al. Atherosclerosis 213(1):184-190(2010)
Davila, S., et al. Nat. Genet. 42(9):772-776(2010)
Scambi, C., et al. PLoS ONE 5 (8), E12162 (2010) :
Bunkenborg, J., et al. Proteomics 4(2):454-465(2004)

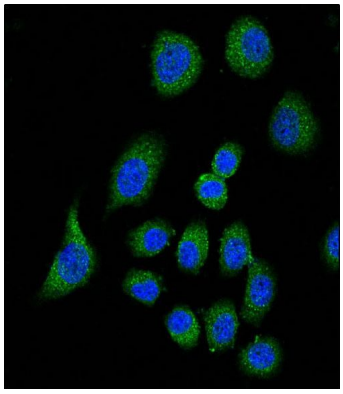
Images



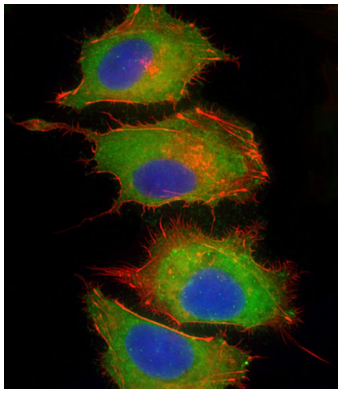
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HepG2 (human liver hepatocellular carcinoma cell line) cells labeling CFH with AP10942c at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-rabbit IgG (1583138) secondary antibody at 1/200 dilution (green). Immunofluorescence image showing cytoplasm staining on HepG2 cell line. Cytoplasmic actin is detected with Dylight® 554 Phalloidin (OI17558410) at 1/100 dilution (red). The nuclear counter stain is DAPI (blue).



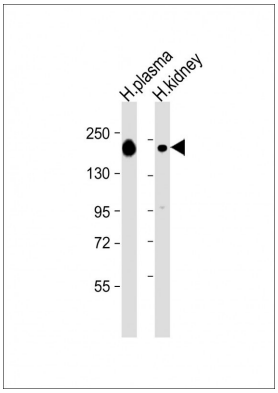
CFH antibody (Center) (Cat. #AP10942c) immunohistochemistry analysis in formalin fixed and paraffin embedded human hepatocarcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the CFH antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.



Confocal immunofluorescent analysis of CFH Antibody (Center) (Cat. #AP10942c) with A549 cell followed by Alexa Fluor® 489-conjugated goat anti-rabbit lgG (green). DAPI was used to stain the cell nuclear (blue).



Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HepG2 (human liver hepatocellular carcinoma cell line) cells labeling CFH with AP10942c at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-rabbit IgG (1583138) secondary antibody at 1/200 dilution (green). Immunofluorescence image showing cytoplasm staining on HepG2 cell line. Cytoplasmic actin is detected with Dylight® 554 Phalloidin (OI17558410) at 1/100 dilution (red). The nuclear counter stain is DAPI (blue).



All lanes : Anti-CFH Antibody (Center) at 1:2000 dilution Lane 1: Human plasma lysate Lane 2: Human kidney lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 139 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.