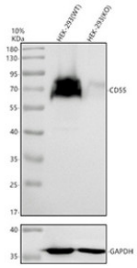
CD55 Rabbit Monoclonal Antibody 17C68 / DAF Rabbit Monoclonal Antibody [clone 17C68] (FY13699)

Catalog No.	Formulation	Size
FY13699	Rabbit IgG in stabilizing components, phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol	100 ul

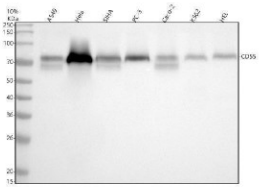
Recombinant RABBIT MONOCLONAL

Bulk quote request

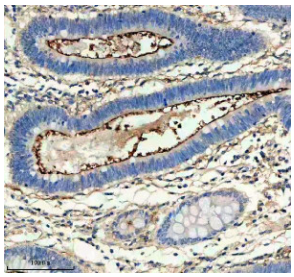
Species Reactivity	Human
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	17C68
Purity	Affinity purified
UniProt	P08174
Applications	Western blot: 1:500 Immunohistochemistry (FFPE): 1:50
Limitations	This CD55 Rabbit Monoclonal Antibody 17C68 / DAF Rabbit Monoclonal Antibody is available for research use only.



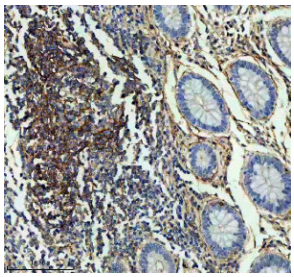
CD55 Rabbit Monoclonal Antibody 17C68 WB Analysis of HEK293 WT and CD55 KO Cell Lysates. Western blot analysis of human HEK293 wild-type (lane 1) and CD55 knockout (lane 2) whole-cell lysates using DAF Rabbit Monoclonal Antibody clone 17C68. An immunoreactive band is detected at approximately 75 kDa in wild-type cells, with markedly reduced signal in the CD55 knockout sample. The calculated molecular weight of CD55 is approximately 41.4 kDa, while extensive glycosylation contributes to the higher apparent molecular weight of the mature protein. GAPDH is shown as a loading control.



CD55 Rabbit Monoclonal Antibody 17C68 WB Analysis of A549, HeLa, SiHa, PC-3, Caco-2, K562 and HEL Cell Lysates. Western blot analysis of human A549 (lane 1), HeLa (lane 2), SiHa (lane 3), PC-3 (lane 4), Caco-2 (lane 5), K562 (lane 6), and HEL (lane 7) whole-cell lysates using DAF Rabbit Monoclonal Antibody clone 17C68 at a 1:1000 dilution. Immunoreactive bands are detected at approximately 75 kDa. CD55 has a calculated molecular weight of approximately 41.4 kDa, but extensive glycosylation contributes to its higher apparent molecular weight during SDS-PAGE. Each lane contains 30 ug of total protein separated by 10% SDS-PAGE under reducing conditions.



CD55 Rabbit Monoclonal Antibody 17C68 IHC Staining of Human Colon Tissue - Glandular Epithelium. Immunohistochemical analysis of FFPE human colon tissue using DAF Rabbit Monoclonal Antibody clone 17C68 at a 1:50 dilution. Brown DAB immunoreactivity is observed predominantly along the luminal surfaces of colonic glandular epithelial cells, with additional staining in surrounding tissue structures. Heat-induced epitope retrieval was performed using EDTA buffer at pH 8.0. Nuclei are counterstained with hematoxylin.



CD55 Rabbit Monoclonal Antibody 17C68 IHC Staining of Human Colon Tissue - Lymphoid Region. Immunohistochemical analysis of FFPE human colon tissue using DAF Rabbit Monoclonal Antibody clone 17C68 at a 1:50 dilution. Brown DAB immunoreactivity is observed in a lymphoid cell-rich region and adjacent stromal structures, while neighboring colonic glands exhibit comparatively limited staining. Heat-induced epitope retrieval was performed using EDTA buffer at pH 8.0. Nuclei are counterstained with hematoxylin.

Description

CD55 Rabbit Monoclonal Antibody 17C68 / DAF Rabbit Monoclonal Antibody targets CD55, a membrane-associated complement regulatory protein also known as decay-accelerating factor (DAF). CD55 protects host cells from complement-mediated damage by accelerating the dissociation of C3 and C5 convertases, thereby limiting amplification of the complement cascade. The protein belongs to the regulators of complement activation family and contains four extracellular complement control protein domains. Its predominant membrane-associated form is attached to the plasma membrane through a glycosylphosphatidylinositol (GPI) anchor, positioning CD55 to regulate complement activity directly at the cell surface. The mature protein is extensively glycosylated, contributing to its higher apparent molecular weight relative to the calculated polypeptide mass.

CD55 regulates complement activation through the classical, lectin, and alternative pathways. In the classical and lectin pathways, it accelerates dissociation of C2a from the C4b2a convertase, while in the alternative pathway it promotes displacement of Bb from C3bBb. These activities shorten convertase lifetimes and reduce downstream complement amplification. Unlike CD59, which inhibits formation of the membrane attack complex, CD55 acts earlier in the complement cascade. Together, these membrane-associated regulatory proteins help preserve cellular integrity while allowing complement-mediated immune defense against appropriate targets. CD55 activity is especially important where circulating complement components encounter host cell membranes.

Abnormal CD55 expression contributes to several complement-associated disorders. In paroxysmal nocturnal hemoglobinuria (PNH), acquired defects in GPI-anchor biosynthesis cause loss of multiple membrane proteins, including CD55 and CD59, from affected blood cells. Their increased susceptibility to complement-mediated injury contributes to the disease. Inherited CD55 deficiency causes CHAPLE disease, characterized by complement hyperactivation, angiopathic thrombosis, and protein-losing enteropathy. CD55 also carries antigens of the Cromer blood group system, linking its extracellular structure to clinically relevant erythrocyte surface determinants.

CD55 expression has additionally been investigated in cancer, infection, inflammation, and transplantation. Elevated expression on certain tumor cells may reduce their susceptibility to complement-dependent immune injury, although its biological consequences depend on cellular context. CD55 also interacts with ADGRE5/CD97 and participates in cellular interactions beyond complement regulation. CD55 Rabbit Monoclonal Antibody 17C68 supports investigation of membrane-associated complement regulation, disease-related changes in CD55 expression, and the mechanisms governing cellular resistance to complement-mediated damage.

For a published monoclonal antibody targeting this complement regulatory protein, see our CD55 Antibody clone 143-30.

Application Notes

Optimal dilution of the CD55 Rabbit Monoclonal Antibody 17C68 / DAF Rabbit Monoclonal Antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human CD55 protein was used as the immunogen for the CD55 Rabbit Monoclonal Antibody 17C68.

Storage

The CD55 Rabbit Monoclonal Antibody 17C68 can be stored at -20oC.

Alternate Names

Decay accelerating factor antibody, DAF antibody, complement decay-accelerating factor antibody, complement regulatory protein CD55 antibody, CD55 antigen antibody, CD55 glycoprotein antibody, GPI-anchored CD55 antibody, membrane decay-accelerating factor antibody, complement regulator DAF antibody, Cromer blood group antigen antibody

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