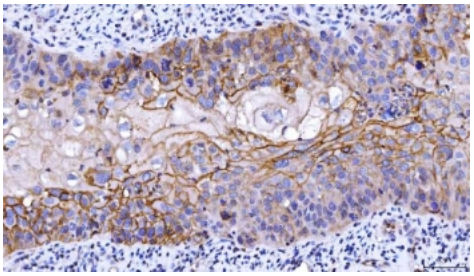
CD55 Antibody 5B9E1 / Decay Accelerating Factor Antibody [clone 5B9E1] (RQ6960)

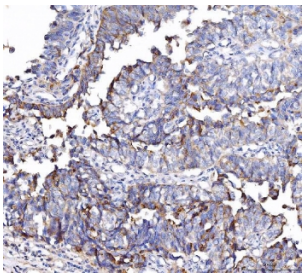
Catalog No.	Formulation	Size
RQ6960	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

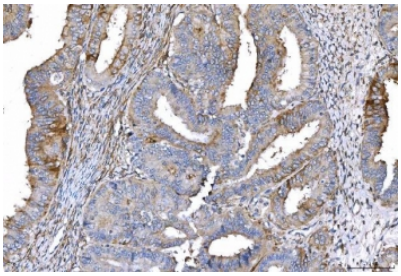
Species Reactivity	Human
Format	Antigen affinity purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1
Clone Name	5B9E1
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P08174
Applications	Western blot: 0.5-1 ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Immunofluorescence: 5ug/ml
Limitations	This CD55 Antibody 5B9E1 / Decay Accelerating Factor Antibody is available for research use only.



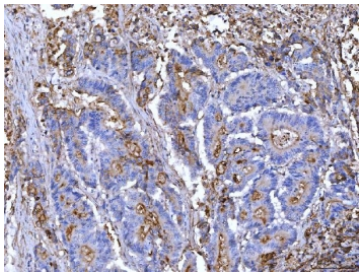
CD55 Antibody 5B9E1 IHC Staining of Human Laryngeal Squamous Cell Carcinoma. Immunohistochemical analysis of FFPE human laryngeal squamous cell carcinoma tissue using Decay Accelerating Factor Antibody clone 5B9E1. Brown DAB immunoreactivity is observed in tumor cell populations, including staining along cellular boundaries and within the cytoplasm. Heat-induced epitope retrieval was performed using EDTA buffer at pH 8 for 20 minutes.



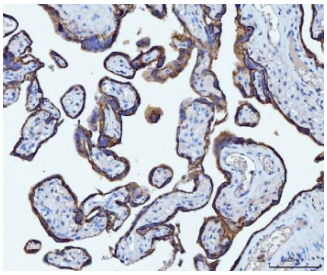
CD55 Antibody 5B9E1 IHC Staining of Human Bladder Epithelial Carcinoma. Immunohistochemical analysis of FFPE human bladder epithelial carcinoma tissue using Decay Accelerating Factor Antibody clone 5B9E1. Brown DAB staining is observed in carcinoma cells, with immunoreactivity along cellular membranes and in additional cellular regions. Heat-induced epitope retrieval was performed using EDTA buffer at pH 8 for 20 minutes.



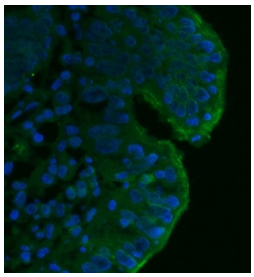
CD55 Antibody 5B9E1 IHC Staining of Human Endometrial Cancer. Immunohistochemical analysis of FFPE human endometrial cancer tissue using Decay Accelerating Factor Antibody clone 5B9E1. Brown DAB immunoreactivity is observed in glandular epithelial structures, including staining along cellular boundaries and within the cytoplasm. Heat-induced epitope retrieval was performed using EDTA buffer at pH 8 for 20 minutes.



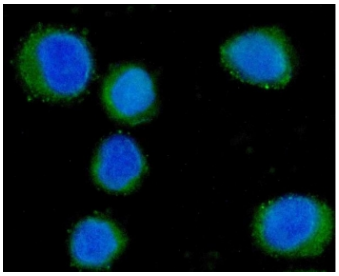
CD55 Antibody 5B9E1 IHC Staining of Human Colorectal Adenocarcinoma. Immunohistochemical analysis of FFPE human colorectal adenocarcinoma tissue using Decay Accelerating Factor Antibody clone 5B9E1. Brown DAB immunoreactivity is observed in malignant glandular epithelial cells, with staining along cellular membranes and within the cytoplasm. Heat-induced epitope retrieval was performed using EDTA buffer at pH 8 for 20 minutes.



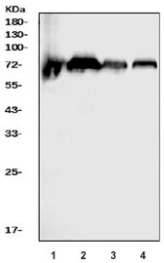
CD55 Antibody 5B9E1 IHC Staining of Human Placental Tissue. Immunohistochemical analysis of FFPE human placenta using Decay Accelerating Factor Antibody clone 5B9E1. Brown DAB immunoreactivity is observed along trophoblastic surfaces surrounding placental villi, consistent with the membrane-associated distribution of CD55. Heat-induced epitope retrieval was performed using EDTA buffer at pH 8 for 20 minutes.



CD55 Antibody 5B9E1 IF Staining of Human Intestinal Cancer Tissue. Immunofluorescence analysis of FFPE human intestinal cancer tissue using Decay Accelerating Factor Antibody clone 5B9E1. Green fluorescence demonstrates CD55-associated staining in epithelial tumor cells, including immunoreactivity along cellular boundaries. Nuclei are counterstained with DAPI in blue. Heat-induced epitope retrieval was performed using EDTA buffer at pH 8 for 20 minutes.



CD55 Antibody 5B9E1 IF Staining of Human SiHa Cells. Immunofluorescence analysis of human SiHa cells using Decay Accelerating Factor Antibody clone 5B9E1. Green fluorescence demonstrates CD55-associated staining around the nuclear regions and along portions of the cellular periphery. Nuclei are counterstained with DAPI in blue. Heat-induced epitope retrieval was performed using citrate buffer at pH 6 for 20 minutes.



CD55 Antibody 5B9E1 WB Analysis of Human Placenta, HeLa, PC-3 and Caco-2 Lysates. Western blot analysis of human placenta tissue (lane 1), HeLa cells (lane 2), PC-3 cells (lane 3), and Caco-2 cells (lane 4) using Decay Accelerating Factor Antibody clone 5B9E1. Immunoreactive bands are detected at approximately 65-75 kDa across the samples. CD55 has a calculated polypeptide molecular weight of approximately 41 kDa, but extensive glycosylation of the mature protein contributes to its higher apparent molecular weight during SDS-PAGE.

Description

CD55 Antibody 5B9E1 / Decay Accelerating Factor Antibody targets CD55, a membrane-associated complement regulatory protein commonly 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 cell surface through a glycosylphosphatidylinositol (GPI) anchor, positioning CD55 to regulate complement activity directly at the plasma membrane. Alternative transcript processing can also produce soluble forms of the protein.

CD55 regulates complement activation through the classical, lectin, and alternative pathways. In the classical and lectin pathways, it promotes dissociation of C2a from the C4b2a convertase, while in the alternative pathway it facilitates displacement of Bb from C3bBb. These activities shorten convertase lifetimes and reduce downstream complement amplification. CD55 acts at an earlier stage of the cascade than CD59, which inhibits assembly of the membrane attack complex. Together with other complement regulatory proteins, CD55 helps distinguish protected host surfaces from targets susceptible to complement-mediated injury. Its activity is particularly important where circulating complement components encounter cellular membranes.

Deficient CD55 expression contributes to disorders involving inappropriate complement activation. In paroxysmal nocturnal hemoglobinuria, acquired defects in GPI-anchor biosynthesis result in the loss of multiple surface proteins, including CD55 and CD59, from affected blood cells. The resulting vulnerability to complement-mediated injury contributes to disease pathology. Inherited CD55 deficiency causes CHAPLE disease, a disorder associated with complement hyperactivation, angiopathic thrombosis, and protein-losing enteropathy. CD55 also carries antigens of the Cromer blood group system, linking its molecular structure to clinically relevant erythrocyte surface determinants.

CD55 expression has been investigated in cancer, inflammation, infection, and transplantation. Increased expression on certain tumor cells may reduce their susceptibility to complement-dependent immune attack, although the biological consequences vary among tumor types and microenvironments. CD55 can also participate in cellular interactions through binding partners such as ADGRE5/CD97. Its extensive glycosylation influences the apparent molecular weight of the mature protein and contributes to variation in electrophoretic migration. CD55 Antibody 5B9E1 supports investigation of complement regulation, membrane protein expression, and the cellular mechanisms that influence susceptibility to immune-mediated injury.

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

Application Notes

Optimal dilution of the CD55 Antibody 5B9E1 / Decay Accelerating Factor Antibody should be determined by the researcher.

Immunogen

Recombinant human CD55 protein (amino acids D35-K347) was used as the immunogen for the CD55 antibody.

Storage

After reconstitution, the CD55 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

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

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