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CD59 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1775a

Product Information

Application	WB, IHC, FC, ICC, E
Primary Accession	P13987
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	8D2B8
Isotype	IgG1
Calculated MW	14177
Description	This gene encodes a cell surface glycoprotein that regulates complement-mediated cell lysis, and it is involved in lymphocyte signal transduction. This protein is a potent inhibitor of the complement membrane attack complex, whereby it binds complement C8 and/or C9 during the assembly of this complex, thereby inhibiting the incorporation of multiple copies of C9 into the complex, which is necessary for osmolytic pore formation. This protein also plays a role in signal transduction pathways in the activation of T cells. Mutations in this gene cause CD59 deficiency, a disease resulting in hemolytic anemia and thrombosis, and which causes cerebral infarction. Multiple alternatively spliced transcript variants, which encode the same protein, have been identified for this gene.
Immunogen	Purified recombinant fragment of human CD59 (AA: 31-111) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	966
Other Names	CD59 glycoprotein, 1F5 antigen, 20 kDa homologous restriction factor, HRF-20, HRF20, MAC-inhibitory protein, MAC-IP, MEM43 antigen, Membrane attack complex inhibition factor, MACIF, Membrane inhibitor of reactive lysis, MIRL, Protectin, CD59, CD59, MIC11, MIN1, MIN2, MIN3, MSK21
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 ICC~~N/A E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CD59 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CD59 {ECO:0000303|PubMed:2475570, ECO:0000312|HGNC:HGNC:1689}
Function	Potent inhibitor of the complement membrane attack complex (MAC) action, which protects human cells from damage during complement activation (PubMed:11882685, PubMed:1698710, PubMed:2475111, PubMed:2475570, PubMed:2606909, PubMed:9053451). Acts by binding to the beta-haipins of C8 (C8A and C8B) components of the assembling MAC, forming an intermolecular beta-sheet that prevents incorporation of the multiple copies of C9 required for complete formation of the osmolytic pore (PubMed:11882685, PubMed:1698710, PubMed:36797260).
Cellular Location	Cell membrane; Lipid-anchor, GPI-anchor. Secreted. Note=Localizes to the cell surface (PubMed:36797260). Soluble form found in a number of tissues (PubMed:8670172).

References

1.Cell Immunol. 2010;265(2):127-32. 2.Chin Med J (Engl). 2009 Sep 20;122(18):2123-8.

Images

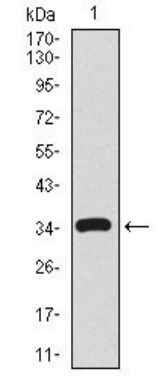

Figure 1: Western blot analysis using CD59 mAb against human CD59 recombinant protein. (Expected MW is 34.7 kDa)

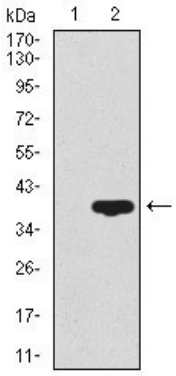

Figure 2: Western blot analysis using CD59 mAb against HEK293 (1) and CD59 (AA: 31-111)-hIgGFc transfected HEK293 (2) cell lysate.

Figure 3: Immunofluorescence analysis of MCF-7 cells using CD59 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

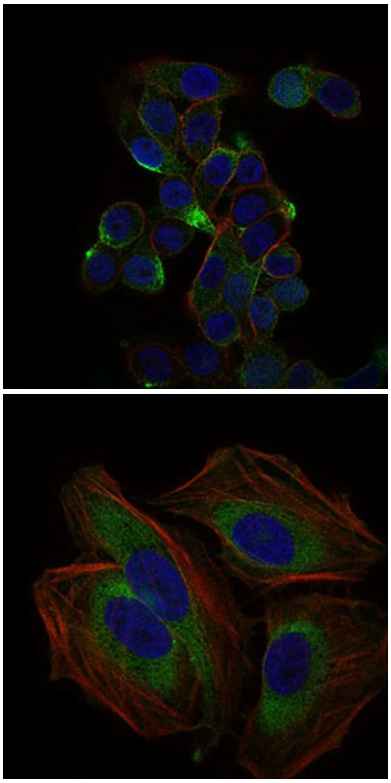

Figure 4: Immunofluorescence analysis of Hela cells using CD59 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

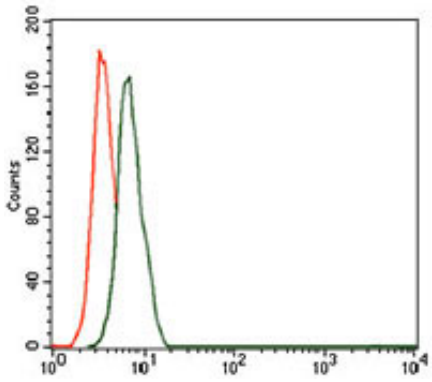

Figure 5: Flow cytometric analysis of HeLa cells using CD59 mouse mAb (green) and negative control (red).

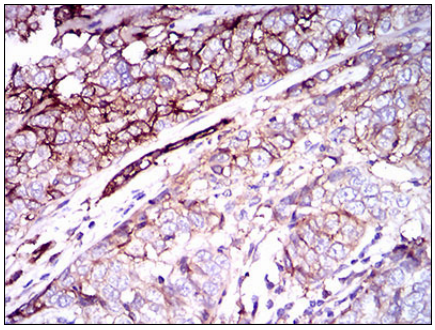

Figure 6: Immunohistochemical analysis of paraffin-embedded bladder cancer tissues using CD59 mouse mAb with DAB staining.