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CD74 Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AW5503

Product Information

Application	WB, IHC-P, FC
Primary Accession	P04233
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Calculated MW	33516
Isotype	IgG2b,κ
Antigen Source	HUMAN

Additional Information

Gene ID	972
Antigen Region	1-232
Other Names	HLA class II histocompatibility antigen gamma chain, HLA-DR antigens-associated invariant chain, Ia antigen-associated invariant chain, Ii, p33, CD74, CD74, DHLAG
Dilution	WB~~1:1000 IHC-P~~1:400 FC~~1:25
Target/Specificity	This antibody is generated from a mouse immunized with a recombinant protein.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
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	CD74 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CD74 (HGNC:1697)
Synonyms	DHLAG
Function	Plays a critical role in MHC class II antigen processing by stabilizing

	peptide-free class II alpha/beta heterodimers in a complex soon after their synthesis and directing transport of the complex from the endoplasmic reticulum to the endosomal/lysosomal system where the antigen processing and binding of antigenic peptides to MHC class II takes place. Serves as cell surface receptor for the cytokine MIF. [Isoform p41]: Stabilizes the conformation of mature CTSL by binding to its active site and serving as a chaperone to help maintain a pool of mature enzyme in endocytic compartments and extracellular space of antigen-presenting cells (APCs). Has antiviral activity by stymieing the endosomal entry of Ebola virus and coronaviruses, including SARS-CoV-2 (PubMed:32855215). Disrupts cathepsin-mediated Ebola virus glycoprotein processing, which prevents viral fusion and entry. This antiviral activity is specific to p41 isoform (PubMed:32855215).
Cellular Location	Cell membrane; Single-pass type II membrane protein. Endoplasmic reticulum membrane. Golgi apparatus, trans-Golgi network. Endosome. Lysosome. Secreted. Note=Transits through a number of intracellular compartments in the endocytic pathway. It can either undergo proteolysis or reach the cell membrane
Tissue Location	Detected in urine (at protein level). [Isoform p33]: In B cells, represents 70% of total CD74 expression.

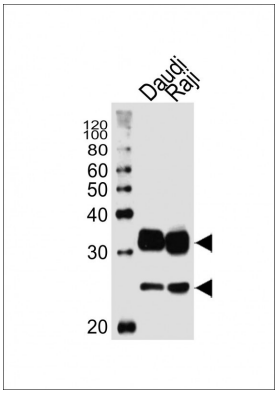
Background

Plays a critical role in MHC class II antigen processing by stabilizing peptide-free class II alpha/beta heterodimers in a complex soon after their synthesis and directing transport of the complex from the endoplasmic reticulum to the endosomal/lysosomal system where the antigen processing and binding of antigenic peptides to MHC class II takes place. Serves as cell surface receptor for the cytokine MIF.

References

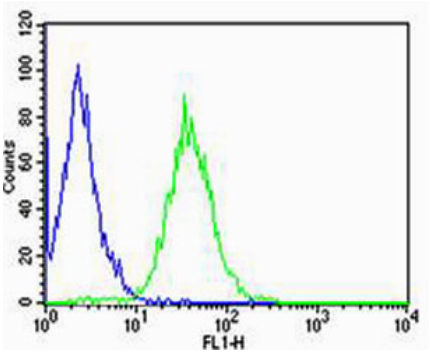
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Strubin M.,et al.EMBO J. 3:869-872(1984).
Kudo J.,et al.Nucleic Acids Res. 13:8827-8841(1985).
O'Sullivan D.M.,et al.Proc. Natl. Acad. Sci. U.S.A. 83:4484-4488(1986).
Kalnine N.,et al.Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.

Images

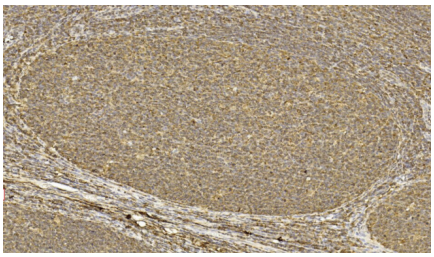


All lanes : Anti-CD74 Antibody at 1:1000 dilution Lane 1: Daudi whole cell lysates Lane 2: Raji whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Mouse IgG, (H+L),Peroxidase conjugated at 1/10000 dilution Predicted band size : 34 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Flow cytometric analysis of Raji cells using CD74(green, Cat#AW5503) compared to an isotype control of mouse



IgG2b(blue). AW5503 was diluted at 1:25 dilution. An Alexa Fluor® 488 goat anti-mouse lgG at 1:400 dilution was used as the secondary antibody.



Immunohistochemical analysis of paraffin-embedded Human tonsil section using Pink1(Cat#AW5503). AW5503 was diluted at 1:400 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.

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