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

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~~N/A 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.

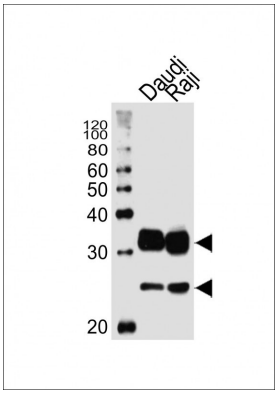
Background

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

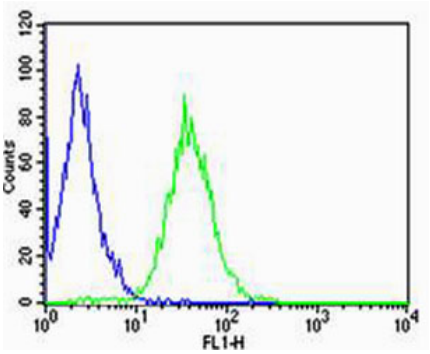
Claesson L.,et al.Proc. Natl. Acad. Sci. U.S.A. 80:7395-7399(1983).
Strubin M.,et al.EMBO J. 3:869-872(1984).
Kudo J.,et al.Nucleic Acids Res. 13:8827-8841(1985).
O'Sullivan D.M.,et al.Proc. Natl. Acad. Sci. U.S.A. 83:4484-4488(1986).
Kalnine N.,et al.Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.

Images

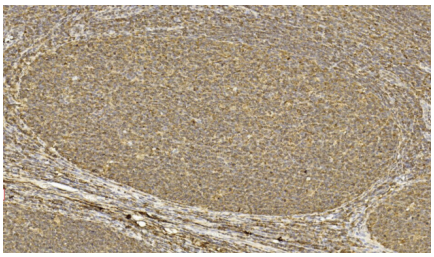


All lanes : Anti-CD74 Antibody at 1:1000 dilution Lane 1: Daudi whole cell lysates Lane 2: Raji whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Mouse IgG, (H+L),Peroxidase conjugated at 1/10000 dilution Predicted band size : 34 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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.