abcam

ab279596

PE Anti-CD74 antibody [01]

Anti-CD74 antibody [01] conjugated to PE - suitable for flow cytometry, and reacts with human samples. Clone [1] is a mouse monoclonal antibody.

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Key facts

Isotype	IgG1
Host species	Mouse
Conjugation	PE
Excitation/Emission	Ex: 480;565nm, Em: 578nm
Storage buffer	Preservative: 0.09% Sodium azide Constituents: 99.41% Deionized Water (H20), 0.5% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Full Length Protein corresponding to Human CD74. Database link P04233
Clone number	01
Purification technique	Affinity purification Protein A
Concentration	0.1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	Concentration: 5 µl/Test, 0.1 mg/ml

Target data

See full target information CD74

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. Class-II-associated invariant chain peptide. Binds to the peptide-binding site of MHC class II alpha/beta heterodimers forming an alpha-beta-CLIP complex, thereby preventing the loading of antigenic peptides to the MHC class II complex until its release by HLA-DM in the endosome. 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).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze, Store in the dark

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	CD74 also known as the invariant chain or Ii is a protein with a mass of about 33 kDa. It is widely expressed on the surface of immune cells such as B cells dendritic cells and macrophages. CD74 plays an important role in the immune system by acting as a chaperone for major histocompatibility complex class II (MHC II) molecules guiding their migration to endosomes where they encounter antigenic

	peptides. The CD74 protein also functions as a cell surface receptor for macrophage migration inhibitory factor (MIF) enhancing the immune response process.
Biological function summary	CD74 facilitates multiple immune regulatory processes. It forms a complex with the MHC II molecules aiding in their proper folding and peptide loading in the endoplasmic reticulum. This complex then travels through the Golgi apparatus towards the lysosomal compartments where antigens are presented to initiate adaptive immune responses. In addition CD74 is involved in signal transduction pathways that regulate cell proliferation and survival influenced by interactions with MIF and other molecules.
Pathways	The role of CD74 extends into both the antigen presentation and MIF signaling pathways. Within the antigen presentation pathway CD74's activity is tightly connected with MHC II and subsequently to CD4+ T cells facilitating the activation of these immune cells. The MIF signaling pathway involves CD74 interacting with CD44 a receptor that further propagates the signaling cascades essential for immune modulation and cell survival.
Associated diseases and disorders	CD74 is linked to inflammatory and autoimmune conditions such as rheumatoid arthritis and systemic lupus erythematosus. Aberrant expression of CD74 influences the presentation of autoantigens and may contribute to the chronic inflammation seen in these disorders. Its connection to MIF which is a pro-inflammatory cytokine further implicates CD74 in these autoimmune scenarios by promoting persistent immune activation. Researchers are also exploring CD74 as a therapeutic target in certain cancers due to its influence on immune surveillance and tumor progression.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

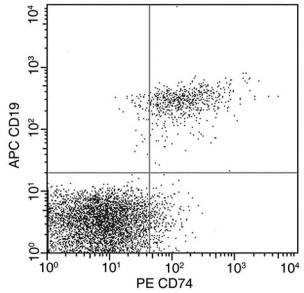
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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1 product image



Flow Cytometry - PE Anti-CD74 antibody [01] (ab279596)

CD74 Flow Cytometry staining using mouse Anti-CD74 antibody

Flow cytometric analysis of Human CD74 expression on human peripheral blood lymphocytes. Cells were stained with ab279596 and APC-conjugated anti-Human CD19. The dot plots were derived from events with the forward and side light-scatter characteristics of viable lymphocytes.

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