

PE anti-human CD74 (Cytoplasmic) Antibody

Catalog# / Size	357603 / 25 tests 357604 / 100 tests
Clone	Pin.1
Regulatory Status	RUO
Other Names	MHC Class II associated invariant chain, invariant chain, Ii, MHC class II chaperone, MIF receptor, DHLAG, HLADG
Isotype	Mouse IgG1, κ
Description	CD74 is a type II transmembrane glycoprotein also known as MHC class II associated invariant chain, invariant chain, Ii, MHC class II chaperone, and MIF receptor. CD74 exists in four isoforms with molecular masses of 33, 35, 41, and 43 kD, depending on genetic splicing. CD74 is primarily expressed on antigen presenting cells, including B cells, monocytes/macrophages, dendritic cells, and Langerhans cells. It is also expressed by activated T cells and activated endothelial and epithelial cells as well as carcinomas of lung, renal, gastric and thymic origin. The primary function of CD74 is intracellular sorting of MHC class II molecules and regulation of exogenous peptide loading onto MHC class II. It is also involved in the modulation of B cell differentiation and positive selection of CD4 ⁺ T cells. It has been reported that CD74 binds MIF (macrophage migration inhibitory factor) and signals through CD44 to regulate innate and adaptive immunity. It is also reported that H. pylori infection occurs through urease B binding of CD74 on gastric epithelial cells, inducing gastric epithelial cell apoptosis, NF-κB activation, and IL-8 production.

Product Details

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Synthetic peptide DQKPVMDQDRDLISNNE, corresponding to amino acids 12-28 of the cytoplasmic tail of human CD74.
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography and conjugated with PE under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.)
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	ICFC - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by intracellular immunofluorescent staining with flow cytometric analysis . For flow cytometric staining, the suggested use of this reagent is 5 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Product Citations	1. Anczurowski M, <i>et al.</i> 2018. Sci Rep. 8:4804. PubMed
RRID	AB_2561938 (BioLegend Cat. No. 357603) AB_2561939 (BioLegend Cat. No. 357604)

Antigen Details

Structure	Type II transmembrane glycoprotein, 33, 35, 41, 43 kD
Distribution	B cells and other antigen presenting cells, activated T cells, activated endothelial and epithelial cells, and certain carcinomas
Function	Regulate loading of exogenous peptides onto MHC class II and B cell differentiation, involved in positive selection of CD4+ T cells.
Interaction	Associates with MHC II
Ligand/Receptor	HLA-DR, MIF, H. pylori urease B, associate with CD44
Cell Type	B cells, Antigen-presenting cells, T cells, Endothelial cells, Epithelial cells
Biology Area	Immunology, Innate Immunity
Molecular Family	CD Molecules, MHC Antigens
Antigen References	<ol style="list-style-type: none">1. Koch N, <i>et al.</i> 1991. <i>J. Immunol.</i> 147:2643.2. Wilson KM, <i>et al.</i> 1993. <i>Immunology</i> 79:331.3. Moldenhauer G, <i>et al.</i> 1999. <i>Immunology</i> 96:473.4. Shi X, <i>et al.</i> 2006. <i>Immunity</i> 25:595.5. Beswick EJ, <i>et al.</i> 2006. <i>Infect. Immun.</i> 74:1148.6. Zola H, <i>et al.</i> 2007. <i>Leukocyte and Stromal Cell Molecules: The CD Markers</i> Wiley-Liss A John Wiley & Sons Inc, Publication.
Gene ID	972

Related Protocols

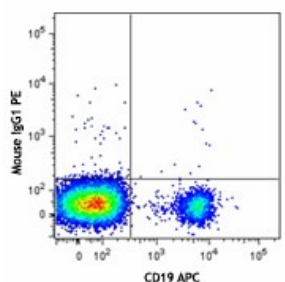
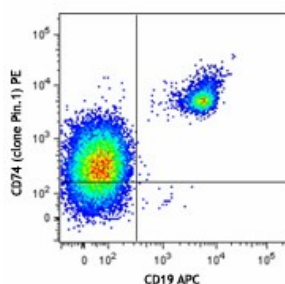
[Intracellular Cytokine Staining Protocol - Video](#)

[Intracellular Flow Cytometry Staining Protocol](#)

Other Formats

PE anti-human CD74 (Cytoplasmic), APC anti-human CD74 (Cytoplasmic), PE/Cyanine7 anti-human CD74 (Cytoplasmic), PerCP/Cyanine5.5 anti-human CD74 (Cytoplasmic)

Product Data



Human peripheral blood lymphocytes were surface stained with CD19 APC, fixed and permeabilized, and then stained with CD74 (clone Pin.1) PE (top) or mouse IgG1, κ PE isotype control (bottom).

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