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CD69 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1374a

Product Information

Application	WB, IHC, FC, E
Primary Accession	Q07108
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	8B6
Isotype	IgG1
Calculated MW	22559
Description	Involved in lymphocyte proliferation and functions as a signal transmitting receptor in lymphocytes, natural killer (NK) cells, andplatelets Subcellular location: Membrane, Single-pass type II membrane protein Tissue specificity: Expressed on the surface of activated T-cells, B-cells, natural killer cells, neutrophils, eosinophils, epidermal Langerhanscells and platelets Sequence similarities: Contains 1 C-type lectin domain.
Immunogen	Purified recombinant fragment of human CD69 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	969
Other Names	Early activation antigen CD69, Activation inducer molecule, AIM, BL-AC/P26, C-type lectin domain family 2 member C, EA1, Early T-cell activation antigen p60, GP32/28, Leukocyte surface antigen Leu-23, MLR-3, CD69, CD69, CLEC2C
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 E~~N/A
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	CD69 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CD69

Synonyms	CLEC2C
Function	Transmembrane protein expressed mainly on T-cells resident in mucosa that plays an essential role in immune cell homeostasis. Rapidly expressed on the surface of platelets, T-lymphocytes and NK cells upon activation by various stimuli, such as antigen recognition or cytokine signaling, stimulates different signaling pathways in different cell types (PubMed:24752896, PubMed:26296369, PubMed:35930205). Negatively regulates Th17 cell differentiation through its carbohydrate dependent interaction with galectin-1/LGALS1 present on immature dendritic cells (PubMed:24752896). Association of CD69 cytoplasmic tail with the JAK3/STAT5 signaling pathway regulates the transcription of RORgamma/RORC and, consequently, differentiation toward the Th17 lineage (By similarity). Also acts via the S100A8/S100A9 complex present on peripheral blood mononuclear cells to promote the conversion of naive CD4 T-cells into regulatory T-cells (PubMed:26296369). Acts as an oxidized low-density lipoprotein (oxLDL) receptor in CD4 T- lymphocytes and negatively regulates the inflammatory response by inducing the expression of PDCD1 through the activation of NFAT (PubMed:35930205). Participates in adipose tissue-derived mesenchymal stem cells (ASCs)-mediated protection against P.aeruginosa infection. Mechanistically, specifically recognizes P.aeruginosa to promote ERK1 activation, followed by granulocyte-macrophage colony-stimulating factor (GM-CSF) and other inflammatory cytokines secretion (PubMed:34841721). In eosinophils, induces IL-10 production through the ERK1/2 pathway (By similarity). Negatively regulates the chemotactic responses of effector lymphocytes and dendritic cells (DCs) to sphingosine 1 phosphate/S1P by acting as a S1PR1 receptor agonist and facilitating the internalization and degradation of the receptor (PubMed:37039481).
Cellular Location	Cell membrane; Single-pass type II membrane protein
Tissue Location	Expressed on the surface of activated T-cells, B- cells, natural killer cells, neutrophils, eosinophils, epidermal Langerhans cells and platelets

References

1. EMBO J. 1997 Feb 17;16(4):673-84. 2. Cell Immunol. 2002 Nov;220(1):20-9. 3. Arch Biochem Biophys. 2005 Jun 1;438(1):11-20.

Images

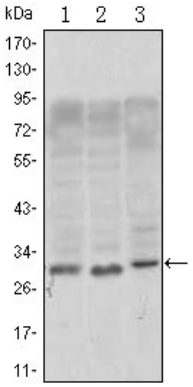
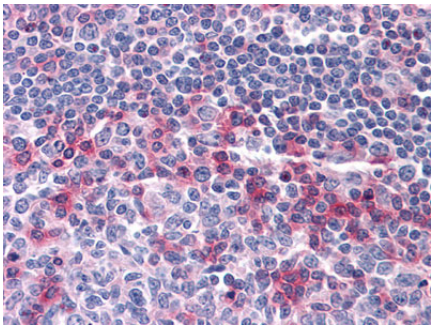


Figure 1: Western blot analysis using CD69 mouse mAb against, Jurkat (1), L1210 (2) and TPH-1 (3) cell lysate.

Figure 2: Immunohistochemical analysis of paraffin-embedded human Tonsil tissues using anti-CD69 mouse mAb



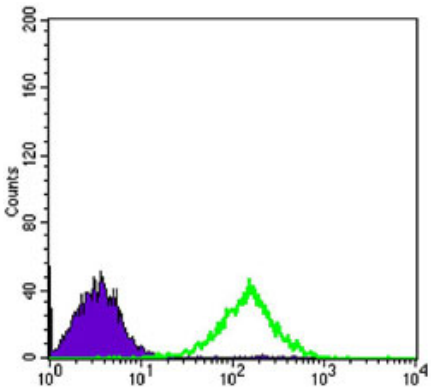


Figure 3: Flow cytometric analysis of Jurkat cells using CD69 mouse mAb (green) and negative control (purple).

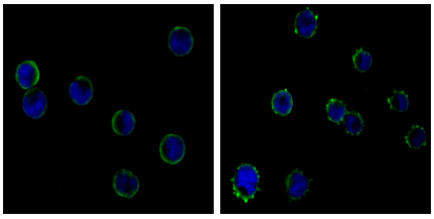


Figure 2: Immunofluorescence analysis of HL-60(left) and K562 (right) cells using CD19 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye.

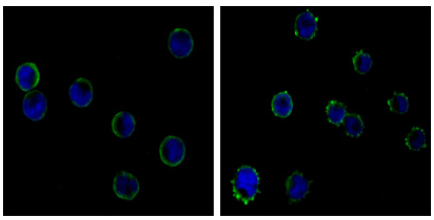


Figure 2:Immunofluorescence analysis of HL-60(left) and K562(right) cells using CD19 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye.

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