abcam

ab269308

PE Anti-LAIR1 antibody [NKTA255]

Anti-LAIR1 antibody [NKTA255] conjugated to PE - suitable for flow cytometry, and reacts with human samples. Clone [NKTA255] is a mouse monoclonal antibody cited in 4 publications.

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Key facts

Isotype	IgG1
Host species	Mouse
Conjugation	PE
Excitation/Emission	Ex: 480;565nm, Em: 578nm
Storage buffer	pH: 7.4 Preservative: 0.1% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing LAIR1 protein. The exact immunogen used to generate this antibody is proprietary information. Database link Q6GTX8
Clone number	NKTA255
Purification technique	Size-exclusion chromatography
Specificity	ab269308 recognizes an extracellular epitope of LAIR1.
Purification notes	The purified antibody is conjugated with R-phycoerythrin (PE) under optimum conditions. The conjugate is purified by size-exclusion chromatography.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	10 µL for 10^6 Cells
Notes	Or 100 µL of whole blood.

Target data

See full target information LAIR1

Function	Functions as an inhibitory receptor that plays a constitutive negative regulatory role on cytolytic function of natural killer (NK) cells, B-cells and T-cells. Activation by Tyr phosphorylation results in recruitment and activation of the phosphatases PTPN6 and PTPN11. It also reduces the increase of intracellular calcium evoked by B-cell receptor ligation. May also play its inhibitory role independently of SH2-containing phosphatases. Modulates cytokine production in CD4+ T-cells, down-regulating IL2 and IFNG production while inducing secretion of transforming growth factor beta. Also down-regulates IgG and IgE production in B-cells as well as IL8, IL10 and TNF secretion. Inhibits proliferation and induces apoptosis in myeloid leukemia cell lines as well as prevents nuclear translocation of NF-kappa-B p65 subunit/RELA and phosphorylation of I-kappa-B alpha/CHUK in these cells. Inhibits the differentiation of peripheral blood precursors towards dendritic cells.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Store in the dark

Supplementary info

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

Activity summary	LAIR1 also known as Leukocyte-Associated Immunoglobulin-like Receptor 1 is a transmembrane protein with a molecular weight of approximately 32 kDa. It expresses mainly on immune cells including T cells B cells and myeloid cells. This receptor by binding to collagen plays a significant role in controlling immune cell signaling. It acts as an inhibitory receptor which helps in maintaining immune system balance and prevents excessive immune responses.

Biological function summary	LAIR1 functions by modulating immune responses and maintaining homeostasis in the immune system. It is a part of a complex pathway involved in inhibitory signaling. When LAIR1 binds to its ligand such as collagen it transduces a signal that reduces activation of immune cells. This inhibition ensures that immune cells do not become overactive which could otherwise lead to tissue damage.
Pathways	LAIR1 participates in immune checkpoint regulation and collagen interaction pathways. It interacts with proteins such as ITIM-containing molecules which transmit inhibitory signals essential for regulating immune cell activation. It also indirectly connects to the TGF-beta signaling pathway which is vital for controlling cell differentiation and immune regulation.
Associated diseases and disorders	LAIR1 is of interest due to its connection to autoimmune diseases and certain cancers. In autoimmune diseases such as rheumatoid arthritis dysregulated LAIR1 signaling may contribute to inflammation. The protein is also linked to cancer where its inhibitory signaling might affect tumor immune evasion. The connection between LAIR1 and these conditions involves proteins like autoimmune-related genes and tumor-associated surface molecules.

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

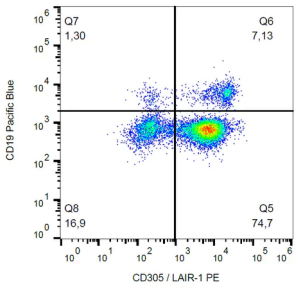
We do not recommend this combination. It is not covered by our product promise.

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1 product image



Flow Cytometry - PE Anti-LAIR1 antibody [NKTA255] (ab269308)

LAIR1 Flow Cytometry staining using mouse Anti-LAIR1 antibody

Flow cytometry analysis (surface staining) of CD305 / LAIR-1 in human peripheral blood (lymphocyte gate) labeling LAIR1 / CD305 with ab269308.

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