

Anti-CD159a Antibody

Rabbit polyclonal antibody to CD159a

Catalog # AP60581

Product Information

Application	WB
Primary Accession	P26715
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	26314

Additional Information

Gene ID	3821
Other Names	NKG2A; NKG2-A/NKG2-B type II integral membrane protein; CD159 antigen-like family member A; NK cell receptor A; NKG2-A/B-activating NK receptor; CD159a
Target/Specificity	Recognizes endogenous levels of CD159a protein.
Dilution	WB~~WB (1/500 - 1/1000)
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	KLRC1
Synonyms	NKG2A {ECO:0000303 PubMed:18083576}
Function	Immune inhibitory receptor involved in self-nonsel self discrimination. In complex with KLRD1 on cytotoxic and regulatory lymphocyte subsets, recognizes non-classical major histocompatibility (MHC) class Ib molecule HLA-E loaded with self-peptides derived from the signal sequence of classical MHC class Ia molecules. Enables cytotoxic cells to monitor the expression of MHC class I molecules in healthy cells and to tolerate self (PubMed: 18083576 , PubMed: 37264229 , PubMed: 9430220 , PubMed: 9486650). Upon HLA-E-peptide binding, transmits intracellular signals through two immunoreceptor tyrosine-based inhibition motifs (ITIMs) by recruiting INPP5D/SHP-1 and INPPL1/SHP-2 tyrosine phosphatases to ITIMs, and ultimately opposing signals transmitted by activating receptors through dephosphorylation of proximal signaling molecules (PubMed: 12165520 , PubMed: 9485206). Key

inhibitory receptor on natural killer (NK) cells that regulates their activation and effector functions (PubMed:[30860984](#), PubMed:[9430220](#), PubMed:[9485206](#), PubMed:[9486650](#)). Dominantly counteracts T cell receptor signaling on a subset of memory/effector CD8-positive T cells as part of an antigen-driven response to avoid autoimmunity (PubMed:[12387742](#)). On intraepithelial CD8-positive gamma-delta regulatory T cells triggers TGFB1 secretion, which in turn limits the cytotoxic programming of intraepithelial CD8-positive alpha-beta T cells, distinguishing harmless from pathogenic antigens (PubMed:[18064301](#)). In HLA-E-rich tumor microenvironment, acts as an immune inhibitory checkpoint and may contribute to progressive loss of effector functions of NK cells and tumor-specific T cells, a state known as cell exhaustion (PubMed:[30503213](#), PubMed:[30860984](#)).

Cellular Location

Cell membrane; Single-pass type II membrane protein

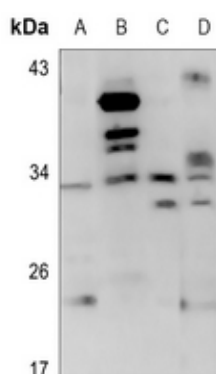
Tissue Location

Predominantly expressed in NK cells (at protein level) (PubMed:20952657, PubMed:9430220, PubMed:9485206). Expressed in intraepithelial CD8-positive T cell subsets with higher frequency in gamma-delta T cells than alpha-beta T cells (at protein level) (PubMed:18064301). Expressed in memory gamma-delta T cells (at protein level) (PubMed:20952657). Restricted to a subset of memory/effector CD8-positive alpha-beta T cells (at protein level) (PubMed:12387742) Expressed in intratumoral NK and CD8-positive T cells (PubMed:30503213). Expressed in melanoma-specific cytotoxic T cell clones (at protein level) (PubMed:9485206). KLRD1-KLRC1 and KLRD1-KLRC2 are differentially expressed in NK and T cell populations, with only minor subsets expressing both receptor complexes (at protein level) (PubMed:20952657).

Background

KLH-conjugated synthetic peptide encompassing a sequence within the N-term region of human CD159a. The exact sequence is proprietary.

Images



Western blot analysis of CD159a expression in HEK293T (A), H1688 (B), mouse lung (C), rat testis (D) whole cell lysates.

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