

**Anti-CD159a/c Antibody**  
Catalog # AP54089**Specification****Anti-CD159a/c Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">P26715</a>
Other Accession	<a href="#">P26717</a> , <a href="#">Q07444</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	26314

**Anti-CD159a/c Antibody - Additional Information****Gene ID** 3821**Other Names**

KLRC1; 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; KLRC2; NKG2C; NKG2-C type II integral membrane protein; CD159 antigen-like family member C; NK cell receptor C; NKG2-C-activating NK receptor; CD159c; KLRC3; NKG2E; NKG2-E type II integral membrane protein; NK cell receptor E; NKG2-E-activating NK receptor

**Target/Specificity**

Recognizes endogenous levels of CD159a/c protein.

**Dilution**

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

**Anti-CD159a/c Antibody - 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:<a href="http://www.uniprot.org/citations/18083576" target="\_blank">18083576</a>, PubMed:<a href="http://www.uniprot.org/citations/37264229" target="\_blank">37264229</a>, PubMed:<a href="http://www.uniprot.org/citations/9430220" target="\_blank">9430220</a>, PubMed:<a href="http://www.uniprot.org/citations/9486650" target="\_blank">9486650</a>). 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:<a href="http://www.uniprot.org/citations/12165520" target="\_blank">12165520</a>, PubMed:<a href="http://www.uniprot.org/citations/9485206" target="\_blank">9485206</a>). Key inhibitory receptor on natural killer (NK) cells that regulates their activation and effector functions (PubMed:<a href="http://www.uniprot.org/citations/30860984" target="\_blank">30860984</a>, PubMed:<a href="http://www.uniprot.org/citations/9430220" target="\_blank">9430220</a>, PubMed:<a href="http://www.uniprot.org/citations/9485206" target="\_blank">9485206</a>, PubMed:<a href="http://www.uniprot.org/citations/9486650" target="\_blank">9486650</a>). 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:<a href="http://www.uniprot.org/citations/12387742" target="\_blank">12387742</a>). 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:<a href="http://www.uniprot.org/citations/18064301" target="\_blank">18064301</a>). 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:<a href="http://www.uniprot.org/citations/30503213" target="\_blank">30503213</a>, PubMed:<a href="http://www.uniprot.org/citations/30860984" target="\_blank">30860984</a>).

### Cellular Location

Cell membrane; Single-pass type II membrane protein

### Tissue Location

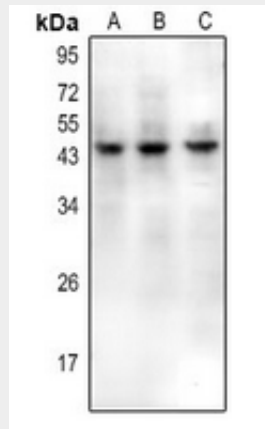
Predominantly expressed in NK cells (at protein level) (PubMed:20952657, PubMed:9430220, PubMed:9485206). Expressed in intraepithelial CD8-positive T cell subsets with higher frequency in gamma-delta T cells than alpha-beta T cells (at protein level) (PubMed:18064301). Expressed in memory gamma-delta 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).

### Anti-CD159a/c Antibody - Protocols

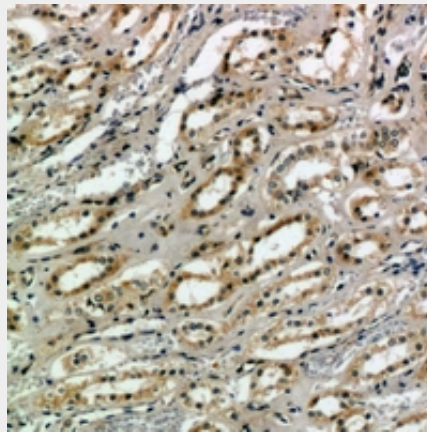
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Anti-CD159a/c Antibody - Images



Western blot analysis of CD159a/c expression in mouse spleen (A), rat spleen (B), Jurkat (C) whole cell lysates.



Immunohistochemical analysis of CD159a/c staining in human kidney formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

#### **Anti-CD159a/c Antibody - Background**

Rabbit polyclonal antibody to CD159a/c