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Anti-NKG2A / CD94 Reference Antibody (monalizumab)

Recombinant Antibody
Catalog # APR10416

Product Information

Application	FC, Kinetics, Animal Model
Primary Accession	P26715
Reactivity	Human, Baboon
Clonality	Monoclonal
Isotype	IgG4
Calculated MW	26314

Additional Information

Target/Specificity	NKG2A / CD94
Endotoxin	
Conjugation	Unconjugated
Expression system	CHO Cell
Format	Purified monoclonal antibody supplied in PBS, pH6.0, without preservative.This antibody is purified through a protein A column.

Protein Information

Name	KLRC1
Synonyms	NKG2A {ECO:0000303|PubMed:18083576}
Function	Immune inhibitory receptor involved in self-nonself 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).

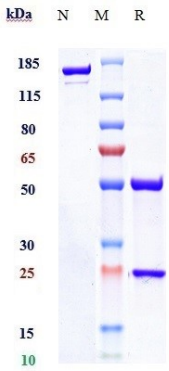
Cellular Location

Cell membrane; Single-pass type II membrane protein

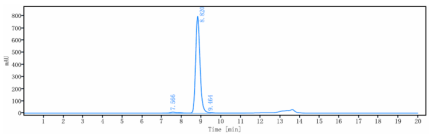
Tissue Location

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).

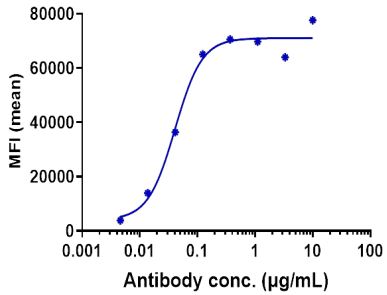
Images



Anti-NKG2A / CD94 Reference Antibody (monalizumab) on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%

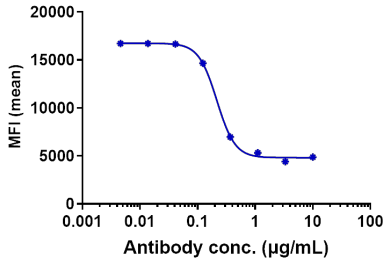


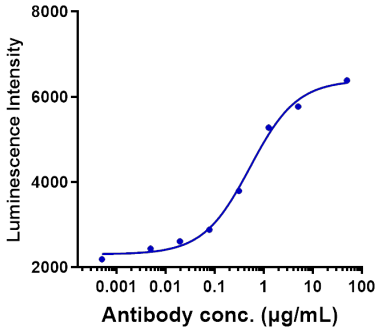
The purity of Anti-NKG2A / CD94 Reference Antibody (monalizumab)is more than 95% ,determined by SEC-HPLC.



Human NKG2A/CD94 HEK293 cells were stained with Anti-NKG2A / CD94 Reference Antibody (monalizumab) and negative control protein respectively, washed and then followed by PE and analyzed with FACS, EC480=0.0409 μg/mL

Anti-NKG2A / CD159a Reference Antibody (monalizumab) FACS Blocking was evaluated using human NKG2A/CD94 HEK293 cells. The IC50 was approximately 0.2162 nM.





Anti-NKG2A / CD159a Reference Antibody (monalizumab) Luciferase Assay was evaluated using Human NKG2A/CD94 HEK293. The EC50 was approximately 0.5236 nM.

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