

**Anti-NKG2A / CD94 Reference Antibody (monalizumab)  
Recombinant Antibody  
Catalog # APR10416****Specification**

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**Anti-NKG2A / CD94 Reference Antibody (monalizumab) - Product Information**

Application	FC, E, FTA
Primary Accession	<a href="#">P26715</a>
Reactivity	Baboon, Cynomolgus, Human
Clonality	Monoclonal
Isotype	IgG4
Calculated MW	145 KDa

**Anti-NKG2A / CD94 Reference Antibody (monalizumab) - Additional Information****Target/Specificity**  
NKG2A / CD94**Endotoxin**  
< 0.001EU/ µg, determined by LAL method.**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.**Anti-NKG2A / CD94 Reference Antibody (monalizumab) - 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](http://www.uniprot.org/citations/18083576), PubMed: [37264229](http://www.uniprot.org/citations/37264229), PubMed: [9430220](http://www.uniprot.org/citations/9430220), PubMed: [9486650](http://www.uniprot.org/citations/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:<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).

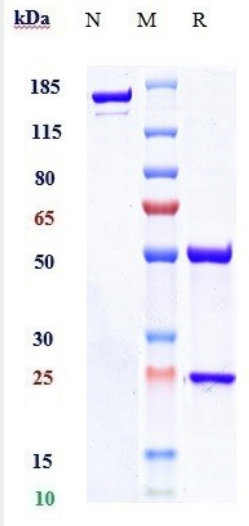
#### Anti-NKG2A / CD94 Reference Antibody (monalizumab) - Protocols

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

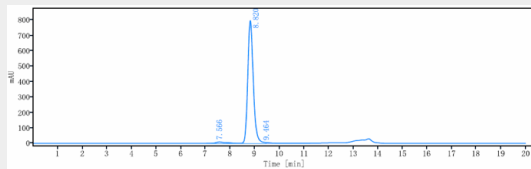
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### Anti-NKG2A / CD94 Reference Antibody (monalizumab) - Images

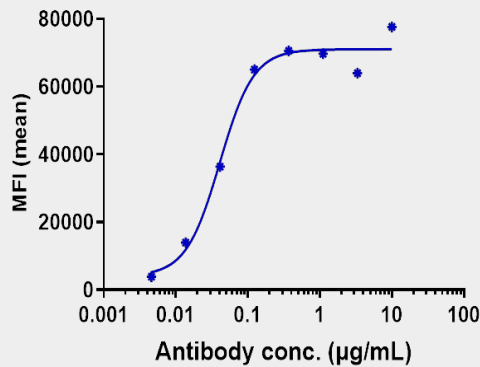




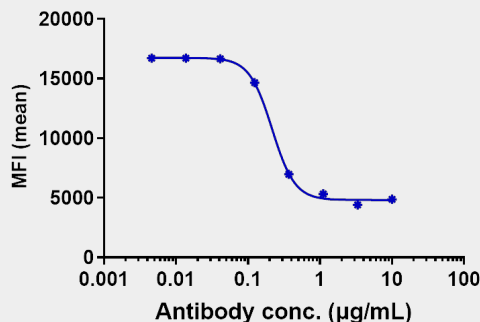
Anti-NKG2A / CD94 Reference Antibody (monalizumab) on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%



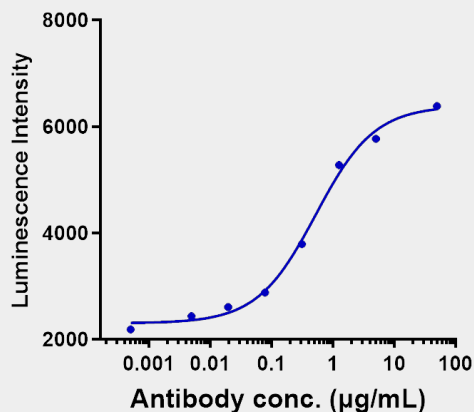
The purity of Anti-NKG2A / CD94 Reference Antibody (monalizumab) is more than 95%, determined by SEC-HPLC.



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.