

**NKG2D Antibody (N-term) Blocking peptide**  
**Synthetic peptide**  
**Catalog # BP13295a****Specification**

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**NKG2D Antibody (N-term) Blocking peptide - Product Information**Primary Accession [P26718](#)**NKG2D Antibody (N-term) Blocking peptide - Additional Information****Gene ID** 100528032;22914**Other Names**

NKG2-D type II integral membrane protein, Killer cell lectin-like receptor subfamily K member 1, NK cell receptor D, NKG2-D-activating NK receptor, CD314, KLRK1, D12S2489E, NKG2D

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody AP13295a was selected from the N-term region of NKG2D. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**NKG2D Antibody (N-term) Blocking peptide - Protein Information****Name** KLRK1**Synonyms** D12S2489E, NKG2D**Function**

Functions as an activating and costimulatory receptor involved in immunosurveillance upon binding to various cellular stress- inducible ligands displayed at the surface of autologous tumor cells and virus-infected cells. Provides both stimulatory and costimulatory innate immune responses on activated killer (NK) cells, leading to cytotoxic activity. Acts as a costimulatory receptor for T-cell receptor (TCR) in CD8(+) T-cell-mediated adaptive immune responses by amplifying T-cell activation. Stimulates perforin-mediated elimination of ligand-expressing tumor cells. Signaling involves calcium influx, culminating in the expression of TNF-alpha. Participates in NK cell- mediated bone marrow graft rejection. May play a regulatory role in differentiation and survival of NK cells. Binds to ligands belonging to various subfamilies of MHC class I-related glycoproteins including MICA, MICB, RAET1E, RAET1G, RAET1L/ULBP6, ULBP1, ULBP2, ULBP3

(ULBP2>ULBP1>ULBP3) and ULBP4.

**Cellular Location**

Cell membrane; Single-pass type II membrane protein Note=Colocalized with HCST on the cell surface

**Tissue Location**

Expressed in natural killer (NK) cells, CD8(+) alpha-beta and gamma-delta T-cells. Expressed on essentially all CD56+CD3- NK cells from freshly isolated PBMC. Expressed in interferon- producing killer dendritic cells (IKDCs).

**NKG2D Antibody (N-term) Blocking peptide - Protocols**

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

- [Blocking Peptides](#)

**NKG2D Antibody (N-term) Blocking peptide - Images****NKG2D Antibody (N-term) Blocking peptide - Background**

Natural killer (NK) cells are lymphocytes that can mediate lysis of certain tumor cells and virus-infected cells without previous activation. They can also regulate specific humoral and cell-mediated immunity. NK cells preferentially express several calcium-dependent (C-type) lectins, which have been implicated in the regulation of NK cell function. This gene encodes a member of the NKG2 family, and the encoded transmembrane protein is characterized by a type II membrane orientation (extracellular C-terminus) and the presence of a C-type lectin domain. The NKG2 gene family is located within the NK complex, a region that contains several C-type lectin genes preferentially expressed in NK cells.

**NKG2D Antibody (N-term) Blocking peptide - References**

Hanaoka, N., et al. J. Immunol. 185(10):5732-5742(2010) Ucisik-Akkaya, E., et al. Mol. Hum. Reprod. 16(10):770-777(2010) Ma, J., et al. J. Med. Virol. 82(9):1501-1507(2010) Champsaur, M., et al. J. Immunol. 185(1):157-165(2010) Campbell, J.A., et al. J. Immunol. 185(1):28-32(2010)