

Anti-NKG2D Picoband Antibody

Catalog # ABO12874

Product Information

Application	WB
Primary Accession	P26718
Host	Rabbit
Reactivity	Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for NKG2D detection. Tested with WB in Human;Mouse;Rat.

Reconstitution Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	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
Calculated MW	25304
Application Details	Western blot, 0.1-0.5 µg/ml
Subcellular Localization	Cell membrane.
Tissue Specificity	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).
Source	Eukaryota
Contents	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Immunogen	A synthetic peptide corresponding to a sequence of human NKG2D (YQFFDESKNWWYESQASCMSQNASLLKVYSKEDQDLLKLVSYSYH).
Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20° C; for one year. After reconstitution, at 4° C; for one month. It can also be aliquotted and stored frozen at -20° C; for a longer time. Avoid repeated freezing and thawing.

Protein Information

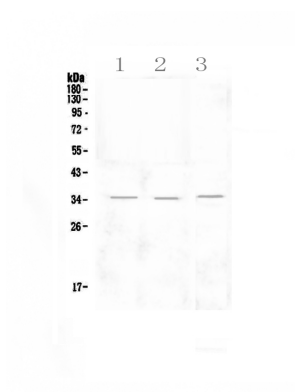
Name	KLRK1
Synonyms	D12S2489E, NKG2D
Function	Functions as an activating and costimulatory receptor involved in immunosurveillance upon binding to various cellular stress- inducible ligands displayed at the surface of autologous tumor cells and virus-infected cells. Provides both stimulatory and costimulatory 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. 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).

Background

NKG2D is encoded by KLRK1 gene which is located in the NK-gene complex (NKC) situated on and chromosome 12 in humans. 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. The NKG2 gene family is located within the NK complex, a region that contains several C-type lectin genes preferentially expressed in NK cells. This gene encodes a member of the NKG2 family. The encoded transmembrane protein is characterized by a type II membrane orientation (has an extracellular C terminus) and the presence of a C-type lectin domain. It binds to a diverse family of ligands that include MHC class I chain-related A and B proteins and UL-16 binding proteins, where ligand-receptor interactions can result in the activation of NK and T cells. The surface expression of these ligands is important for the recognition of stressed cells by the immune system, and thus this protein and its ligands are therapeutic targets for the treatment of immune diseases and cancers. Read-through transcription exists between this gene and the upstream KLRC4 (killer cell lectin-like receptor subfamily C, member 4) family member in the same cluster.

Images

Figure 1. Western blot analysis of NKG2D using anti-NKG2D antibody (ABO12874).



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