

Anti-NKG2D/KLRK1 Antibody Picoband®

Catalog Number: A00661-1

About KLRK1

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.

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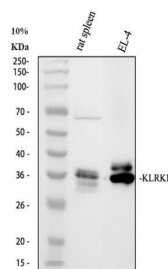
Overview

Product Name	Anti-NKG2D/KLRK1 Antibody Picoband®
Reactive Species	Mouse, Rat
Description	Boster Bio Anti-NKG2D/KLRK1 Antibody Picoband® catalog # A00661-1. Tested in Flow Cytometry, WB applications. This antibody reacts with Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	Flow Cytometry, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na ₂ HPO ₄ .
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P26718

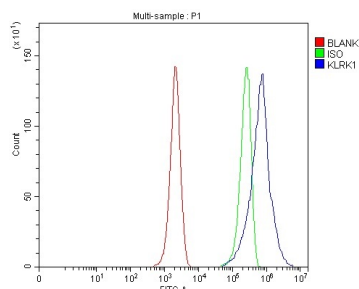
Technical Details

Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human NKG2D, which shares 76.7% amino acid (aa) sequence identity with both mouse and rat NKG2D.
Recommended Detection Systems	Boster recommends ECL Plus Western Blotting Substrate (Catalog # AR1196-200) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Mouse, Rat Flow Cytometry(Fixed), 1-3 ug/1x10 ⁶ cells, Mouse Note: For flow cytometry (FCM), validated for fixed cells only. Not validated for FACS or surface flow cytometry using live cells.

Anti-NKG2D/KLRK1 Antibody Picoband® (A00661-1) Images



Western blot analysis of NKG2D/KLRK1 using anti-NKG2D/KLRK1 antibody (A00661-1). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: rat spleen tissue lysates, Lane 2: mouse EL-4 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-NKG2D/KLRK1 antigen affinity purified polyclonal antibody (A00661-1) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for NKG2D/KLRK1 at approximately 35 kDa. The expected band size for NKG2D/KLRK1 is at 25 kDa.



Flow Cytometry analysis of PC-3 cells using anti-NKG2D/KLRK1 antibody (A00661-1). Overlay histogram showing EL-4 cells stained with A00661-1 (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-NKG2D/KLRK1 Antibody (A00661-1, 1 ug/1x10⁶ cells) for 30 min at 20°C. Fluoro488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10⁶) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

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