abcam

ab203353

Anti-NKG2D antibody

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.4 Preservative: 0.02% Proclin 300 Constituents: 50% Glycerol (glycerin, glycerine), 48.98% TBS, 1X, 1% BSA
Form	Liquid
Clonality	Polyclonal
Immunogen	Synthetic Peptide within Rat Klrk1 aa 100-200 conjugated to Keyhole Limpet Haemocyanin. The exact immunogen used to generate this antibody is proprietary information. Database link O70215
Purification technique	Affinity purification Protein A
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Mouse
Dilution info	1/100 - 1/500
Notes	(or 1/50 -1/200 using a fluorescent secondary antibody). Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Species	Human

Dilution info	1/100 - 1/500
Notes	(or 1/50 -1/200 using a fluorescent secondary antibody). Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Flow Cyt

Tested

Species	Mouse
Dilution info	1/20 - 1/100
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information KLRK1

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.

Storage

Shipped at conditions	Blue Ice

Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	NKG2D also known as natural killer group 2 member D is a type-2 transmembrane receptor with a mass of approximately 42 kDa. Expressed primarily on natural killer (NK) cells CD8+ T cells subsets of CD4+ T cells and some macrophages it recognizes stress-induced ligands presented on target cells. This protein plays an important role in the immune system's recognition and elimination of infected or transformed cells by binding to its ligands which include MHC class I chain-related proteins MICA/B and UL16-binding proteins.
Biological function summary	NKG2D acts as an activating receptor on the cell surface that initiates immune responses leading to cytotoxicity against target cells. It functions as part of a complex involving the adaptor protein DAP10 which transduces activating signals to promote cellular immune responses. This interaction amplifies the activation of immune cells and contributes to the host's defense against tumors and virally infected cells.
Pathways	NKG2D plays a significant role in immune surveillance and signaling pathways. It actively involves in the natural killer (NK) cell-mediated cytotoxicity pathway and the adaptive immune response pathway. The interaction with proteins such as DAP10 is critical for its signaling function contributing to its interaction within these pathways. The signaling through NKG2D directly affects the activation states and responses of immune cells which are vital in immune defense.
Associated diseases and disorders	NKG2D is implicated in cancer and autoimmune diseases. In cancer overexpression of its ligands on tumor cells makes them susceptible to NKG2D-mediated cell lysis. On the other hand aberrant expression of NKG2D ligands in autoimmune disorders can lead to inappropriate immune activation. The interaction with MICA/B proteins is significant in these conditions emphasizing its importance in both immune surveillance and potential disease pathogenesis.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

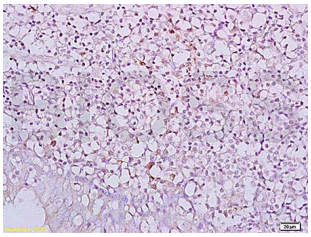
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

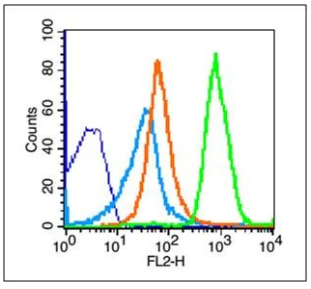
3 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NKG2D antibody (ab203353)

NKG2D Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-NKG2D antibody

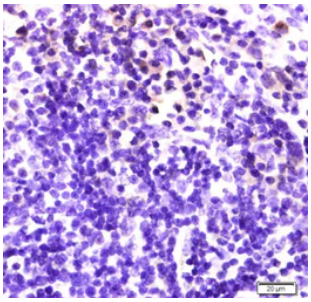
Immunohistochemical analysis of formalin-fixed, paraffin embedded Human nasopharyngeal carcinoma tissue labeling NKG2D with ab203353 at 1/200 dilution, followed by conjugation to the secondary antibody and DAB staining.



Flow Cytometry - Anti-NKG2D antibody (ab203353)

NKG2D Flow Cytometry staining using rabbit Anti-NKG2D antibody

Mouse thymus cells probed with ab203353 (green) at 1:100 dilution for 30 minutes compared to control cells (blue) and isotype control (orange)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NKG2D antibody (ab203353)

NKG2D Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-NKG2D antibody

ab203353 staining NKG2D in mouse lymph node tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with paraformaldehyde and blocked with 20% serum for 20 minutes at 37°C; antigen retrieval was by heat mediation in a citrate buffer for 15 minutes. Samples were incubated with primary antibody (1/400 in blocking buffer) overnight at 4°C, followed by a conjugated secondary and DAB staining.

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