abcam

ab35035

FITC Anti-NKG2D antibody [1D11]

Anti-NKG2D antibody [1D11] conjugated to FITC - suitable for flow cytometry, and reacts with human samples. Clone [1D11] is a mouse monoclonal antibody and one of the most commonly used clones for flow cytometry.

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Key facts

Isotype	IgG1
Host species	Mouse
Conjugation	FITC
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 7.4 Preservative: 0.09% Sodium azide Constituents: PBS, 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing KLRK1 protein. The exact immunogen used to generate this antibody is proprietary information. Database link P26718
Clone number	1D11
Purification technique	Affinity purification Protein G
Concentration	0.1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant.

Reactivity data

Flow Cyt

Expected

Species	Human
Dilution info	-
Notes	ab91356 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

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 conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

Spleen cells from immunised RBF/DnJ mice were fused with cells of the p3 mouse myeloma cell line.

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

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