abcam

ab95796

PE/Cy7® Anti-NKG2D antibody [CX5]

Anti-NKG2D antibody [CX5] conjugated to PE/Cy7® - suitable for flow cytometry, and reacts with mouse samples. Clone [CX5] is a rat monoclonal antibody cited in 41 publications.

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Key facts

Isotype	IgG1
Host species	Rat
Conjugation	PE/Cy7®
Excitation/Emission	Ex: 565nm, Em: 778nm
Storage buffer	pH: 7.2 Preservative: 0.09% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Full Length Protein corresponding to Mouse Klrk1. The exact immunogen used to generate this antibody is proprietary information. Database link O54709
Clone number	CX5
Purification technique	Affinity purification Protein G
Light chain type	kappa
Concentration	0.2 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Mouse
Dilution info	0.25 µg for 10^5-10^8 Cells
Notes	Perform staining in a final volume of 100µl.

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 RAET1A, RAET1B, RAET1C, RAET1D, RAET1E, H60 and MULT1.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

This tandem dye is sensitive to photo-induced oxidation. Protect this reagent from light during storage and all handling steps. When staining cells with PE-Cy7-conjugated antibodies, always protect samples from light.

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

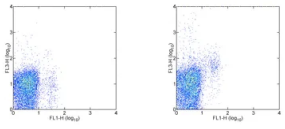
We do not recommend this combination. It is not covered by our product promise.

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.

1 product image



Flow Cytometry - PE/Cy7® Anti-NKG2D antibody [CX5] (ab95796)

NKG2D Flow Cytometry staining using rat Anti-NKG2D antibody

Staining of C57BL/6 splenocytes with anti-CD49b FITC and either 0.125µg of Rat IgG1k isotype control PE-Cy7 (left) or 0.125µg of ab95796 (right).
Cells in the lymphocyte gate were used for analysis.

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