abcam

# ab314290

# PE Anti-NKG2D antibody [EPR22935-131]

Recombinant | RabMAb

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Conjugation** | PE |
| **Excitation/Emission** | Ex: 480;565nm, Em: 578nm |
| **Storage buffer** | pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 1% BSA |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Clone number** | EPR22935-131 |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 0.5 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

## Flow Cyt

### Tested

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|---|---|
| **Species** | Human |
| **Dilution info** | 1/2500 |

| | |
|---|---|
| **Notes** | - |

## Target data

See full target information KLRK1

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|---|---|
| **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

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| **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** | +4°C |
| **Aliquoting information** | Upon delivery aliquot |
| **Storage information** | Avoid freeze / thaw cycle, Store in the dark |

## Notes

**Patented technology**
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

**What are the advantages of a recombinant monoclonal antibody?**
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility

- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

## Supplementary info

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

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|---|---|
| **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.

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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.

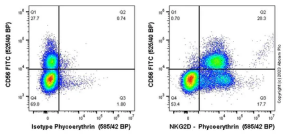
In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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

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## 1 product image

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### Flow Cytometry - PE Anti-NKG2D antibody [EPR22935-131] (ab314290)

NKG2D Flow Cytometry staining of Human peripheral blood mononuclear cells (PBMCs) using rabbit Anti-NKG2D antibody

Flow cytometry staining of human peripheral blood mononuclear cells (PBMCs) with ab314290 (right) or Rabbit IgG (monoclonal) Phycoerythrin Isotype Control (ab209478) (left). PBMCs were incubated for 30 min on ice in 1x PBS containing 10 µg/ml human IgG and 10 % normal goat serum to block FC receptors and non-specific protein-protein interaction followed by the antibody ab314290 or Rabbit IgG (monoclonal) Phycoerythrin Isotype Control (ab209478) (1x $10^6$ in 100 µl at 0.2 µg/ml (1/2500)) for 30min on ice. The cells were simultaneously stained with CD56.

Acquisition of >30000 events were collected using a 50 mW Yellow/Green laser (561nm) and 585/42 bandpass filter. Events were gated on viable cells.

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