

Anti-NKG2D [KYK-2] Bulk size M Ab03075-10.29-BS

This is a Fab fragment with His tag.

This reformatted human antibody was made using the variable domain sequences of the original Human Fab format for improved compatibility with existing reagents assays and techniques.

Isotype and Format: Human Fab fragment, His-Tagged, Lambda

Clone Number: KYK-2

Alternative Name(s) of Target: KLRK1; CD314; NKG2-D type II integral membrane protein; NK cell receptor D; Killer cell lectin-like receptor subfamily K member 1; NKG2-D-activating NK receptor; KYK2; KYK-2.0

UniProt Accession Number of Target Protein: P26718

Published Application(s): agonist, antagonist, ELISA, FC

Published Species Reactivity: Human

Immunogen: The original antibody was isolated from a Fab library generated from the bone marrow from 6 healthy donors by collecting total RNA preparation and RT-PCR amplification of human V κ , V λ , and V H encoding sequences. The library was panned against human NKG2D for isolation of this clone.

Specificity: This antibody bind human NKG2D. Natural killer (NK) cells serve as key innate effectors and their activity has been considered a prognostic biomarker in diverse human diseases. NKG2d 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. It provides both stimulatory and costimulatory innate immune responses on activated killer (NK) cells, leading to cytotoxic activity. I also acts as a costimulatory receptor for T-cell receptor (TCR) in CD8+ T-cell-mediated adaptive immune responses by amplifying T-cell activation. and participates in NK cell-mediated bone marrow graft rejection.

Application Notes: The binding of this antibody to NKG2D expressed on subpopulations of human peripheral blood mononuclear cells (PBMC) was done using flow cytometry. This antibody was not capable of binding mouse NKG2D. The IgG1 version of this antibody is reported to show dual antagonistic and agonistic activity. It was reported that soluble KYK-2.0 IgG1 exhibits antagonistic activity through interfering with effector cell to target cell recognition mediated by NKG2D receptor/ligand interactions. KYK-2.0 IgG1 in solution significantly blocked the acquired cytolytic activity of ex vivo expanded human NK cells. The agonistic activity of this antibody was determined using a degranulation assay. It was shown that immobilized KYK-2.0 IgG1 potently induced NK cell degranulation in PBMC from 4 different healthy donors

(PMID: 18809410). This antibody was also used in the generation of a bispecific antibody targeting NKG2D and 2B4 receptors. The combination mounts selective cytotoxicity and IFN- γ production of NK cells and helps in assessing NK cell functions (PMID: 34486371). This antibody was also used in the generation of another bispecific antibody against KNG2B and ErbB2 (PMID: 34599028).

Antibody First Published in: Kwong et al. Generation, affinity maturation, and characterization of a human anti-human NKG2D monoclonal antibody with dual antagonistic and agonistic activity. J Mol Biol. 2008 Dec 31;384(5):1143-56. [PMID:18809410](#)

Note on publication: Describe the generation, characterization and affinity maturation of this antibody.

Product Form

Size: 1 mg Purified antibody in bulk size.

Purification: Purified by Immobilized Metal Affinity Chromatography

Supplied In: PBS only.

Storage Recommendation: Store at 4°C for up to 3 months. Note, this antibody is provided without added preservatives, it is therefore recommended this antibody be handled under sterile conditions. For longer storage, aliquot and store at -20°C.

Concentration: See vial label

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.