ARG65377
anti-CD314 / NKG2D antibody [1D11] (azide free)

Package: 50 µg
Store at: -20°C

Summary

Product Description	Azide free Mouse Monoclonal antibody [1D11] recognizes CD314 / NKG2D
Tested Reactivity	Hu
Tested Application	FACS, FuncSt, IHC-Fr, IP
Specificity	The clone 1D11 recognizes CD314 / NKG2D, a 42 kDa C-type lectin-like activating receptor expressed by NK cells, gamma/delta T cells, and CD8+ T cells.
Host	Mouse
Clonality	Monoclonal
Clone	1D11
Isotype	IgG1
Target Name	CD314 / NKG2D
Immunogen	NKL cell line
Conjugation	Un-conjugated
Alternate Names	NKG2-D-activating NK receptor; CD antigen CD314; D6H12S2489E; NK cell receptor D; NKG2-D type II integral membrane protein; NKG2-D; Killer cell lectin-like receptor subfamily K member 1; Nkg2d

Application Instructions

Application table

Application	Dilution
FACS	1 - 4 µg/ml
FuncSt	Assay-dependent
IHC-Fr	5 - 10 µg/ml
IP	Assay-dependent

Application Note: Functional studies: Blocking of ligand binding.
* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

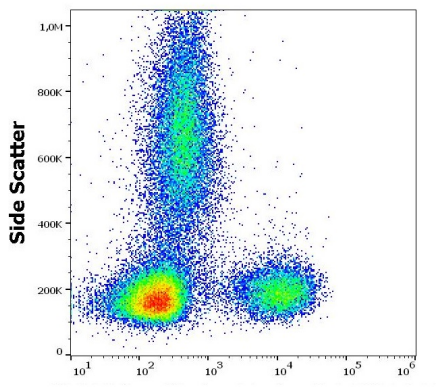
Form	Liquid
Purification	Purification with Protein A.
Purification Note	0.2 µm filter sterilized.
Purity	> 95% (by SDS-PAGE)
Buffer	PBS (pH 7.4)
Concentration	1 mg/ml

Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

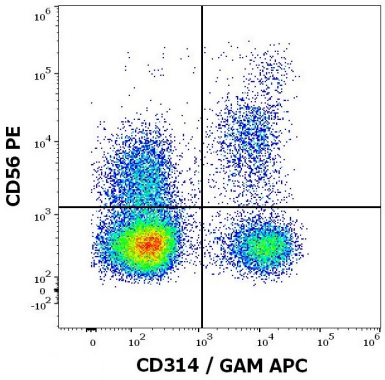
Database links	GeneID: 22914 Human Swiss-port # P26718 Human
Gene Symbol	KLRK1
Gene Full Name	killer cell lectin-like receptor subfamily K, member 1
Background	CD314, also known as NKG2D (natural killer receptor G2D) or KLRK1 (killer cell lectin-like receptor subfamily K, member 1), is a homodimeric C-type lectin-like activating receptor and costimulator with type II membrane orientation (C teminus extracellular). CD314 homodimers are associated with DAP10, a membrane adaptor protein that signals similar to CD28 by recruitment of phosphatidylinositol 3-kinase. Engagement of CD314 amplifies antigen-specific T cell responses in CD314-positive T cell populations. In NK cells, CD314 is a primary activating receptor. As CD314 ligands the MHC class-I chain-related proteins A and B (MICA, MICB) and UL16-binding proteins (ULBPs) have been identified.
Function	Function 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-alpha. 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, ULBP1, ULBP2, ULBP3 (ULBP2>ULBP1>ULBP3) and ULBP4. [UniProt]
Research Area	Immune System antibody
Calculated Mw	25 kDa

Images



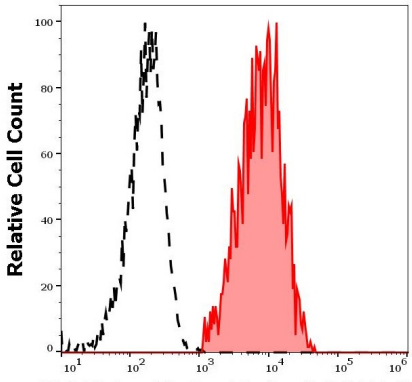
ARG65377 anti-CD314 / NKG2D antibody [1D11] (azide free) FACS image

Flow Cytometry: Human peripheral blood cells stained with ARG65377 anti-CD314 / NKG2D antibody [1D11] (azide free) at 2 µg/ml dilution, followed by APC-conjugated Goat anti-Mouse antibody.



ARG65377 anti-CD314 / NKG2D antibody [1D11] (azide free) FACS image

Flow Cytometry: Human lymphocytes stained with ARG65377 anti-CD314 / NKG2D antibody [1D11] (azide free) at 2 µg/ml dilution, followed by APC-conjugated Goat anti-Mouse antibody. Cells were co-stained with anti-CD56 antibody [LT56] (PE) (10 µl reagent / 100 µl of peripheral whole blood).



ARG65377 anti-CD314 / NKG2D antibody [1D11] (azide free) FACS image

Flow Cytometry: Separation of human CD314 / NKG2D positive CD56 positive NK cells (red-filled) from CD314 / NKG2D negative CD56 negative lymphocytes (black-dashed). Human peripheral whole blood stained with ARG65377 anti-CD314 / NKG2D antibody [1D11] (azide free) at 2 µg/ml dilution, followed by APC-conjugated Goat anti-Mouse antibody.