

Datasheet: MCA2405PE

Description:	MOUSE ANTI HUMAN CD314:RPE
Specificity:	CD314
Other names:	NKG2D
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	1D11
Isotype:	IgG1
Quantity:	100 TESTS

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			Neat - 1/5

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

Target Species	Human		
Product Form	Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized		
Reconstitution	Reconstitute with 1.0 ml distilled water		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	RPE 488nm laser	496	578
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant.		
Buffer Solution	Phosphate buffered saline		
Preservative	0.09% sodium azide (NaN ₃)		
Stabilisers	1% bovine serum albumin		
	5% sucrose		

Immunogen	NKL cells.
External Database Links	<p>UniProt: P26718 Related reagents</p> <p>Entrez Gene: 100528032 KLRC4-KLRK1 Related reagents</p>
Synonyms	D12S2489E, NKG2D
RRID	AB_609592
Fusion Partners	Spleen cells from immunised RBF/DnJ mice were fused with cells of the p3 mouse myeloma cell line.
Specificity	<p>Mouse anti Human CD314 antibody, clone 1D11 recognizes CD314, also known as natural killer receptor G2 (NKG2D) and as killer cell lectin-like receptor subfamily K, member 1 (KLRK1).</p> <p>CD314 is a C-type lectin-like activating receptor which is expressed on most natural killer (NK) cells, CD8 T cells and gamma delta T cells. CD314 forms homodimers that signal through an associated DAP10 adaptor protein.</p> <p>Ligands of CD314 include MICA, MICB and UL16 binding protein (ULBP), which are inducibly expressed. Ligand binding to CD314 results in NK cell activation and potent co-stimulation of effector T cells.</p> <p>Mouse anti Human CD314 antibody, clone 1D11 is reported to inhibit T cell recognition of MICA (Bauer <i>et al.</i> 1999).</p>
Flow Cytometry	Use 10µl of the suggested working dilution to label 10 ⁶ cells in 100µl
References	<ol style="list-style-type: none"> 1. Wu, J. <i>et al.</i> (2000) DAP10 and DAP12 form distinct, but functionally cooperative, receptor complexes in natural killer cells. J Exp Med. 192:1059-68. 2. Groh, V. <i>et al.</i> (2001) Costimulation of CD8alpha T cells by NKG2D via engagement by MIC induced on virus-infected cells. Nat Immunol. 2 (3): 255-60. 3. Roberts, A.I. <i>et al.</i> (2001) NKG2D receptors induced by IL-15 costimulate CD28-negative effector CTL in the tissue microenvironment. J Immunol. 167: 5527-30. 4. Gumperz, J. <i>et al.</i> (2002) Functionally distinct subsets of CD1d-restricted natural killer T cells revealed by CD1d tetramer staining. J Exp Med. 195:625-36. 5. Wu, J. <i>et al.</i> (2002) T cell antigen receptor engagement and specificity in the recognition of stress-inducible MHC class I-related chains by human epithelial gamma delta T cells. J Immunol. 169:1236-40. 6. Jinushi, M. <i>et al.</i> (2003) Autocrine/paracrine IL-15 that is required for type I IFN-mediated dendritic cell expression of MHC class I-related chain A and B is impaired in hepatitis C virus infection. J Immunol. 171 (10): 5423-9. 7. Groh, V. <i>et al.</i> (2003) Stimulation of T cell autoreactivity by anomalous expression of

- NKG2D and its MIC ligands in rheumatoid arthritis. [Proc Natl Acad Sci U S A. 100:9452-7](#)
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Further Reading 1. Groh, V. *et al.* (2003) Stimulation of T cell autoreactivity by anomalous expression of NKG2D and its MIC ligands in rheumatoid arthritis. [Proc Natl Acad Sci U S A. 100 \(16\): 9452-7.](#)

Storage Prior to reconstitution store at +4°C.
After reconstitution store at +4°C.
DO NOT FREEZE.
This product should be stored undiluted. This product is photosensitive and should be protected from light. Should this product contain a precipitate we recommend microcentrifugation before use.

Guarantee 12 months from date of despatch

Health And Safety Information Material Safety Datasheet documentation #20487 available at: <https://www.bio-rad-antibodies.com/SDS/MCA2405PE>
20487

Regulatory For research purposes only

Related Products

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:RPE \(MCA928PE\)](#)

Recommended Useful Reagents

[HUMAN SEROBLOCK \(BUF070A\)](#)

[HUMAN SEROBLOCK \(BUF070B\)](#)

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