

Datasheet: MCA2405

BATCH NUMBER 148972

Description:	MOUSE ANTI HUMAN CD314
Specificity:	CD314
Other names:	NKG2D
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	1D11
Isotype:	IgG1
Quantity:	0.2 mg

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	▪			1/50 - 1/200
Immunohistology - Frozen	▪			
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting			▪	

Where this antibody 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 antibody for use in their own system using appropriate negative/positive controls.

Target Species	Human
Product Form	Purified IgG - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide

Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
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_567174
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 et al. 1999).</p>
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells in 100ul.
References	<ol style="list-style-type: none"> 1. Bauer, S. <i>et al.</i> (1999) Activation of NK cells and T cells by NKG2D, a receptor for stress-inducible MICA. Science. 285 (5428): 727-9. 2. Das, H. <i>et al.</i> (2004) Mechanisms of Vdelta1 gammadelta T cell activation by microbial components. J Immunol. 172 (11): 6578-86. 3. Groh, V. <i>et al.</i> (2001) Costimulation of CD8alphabeta T cells by NKG2D via engagement by MIC induced on virus-infected cells. Nat Immunol. 2 (3): 255-60. 4. 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. 5. 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.](#)
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7. Sugita, J. *et al.* (2010) Differential effects of interleukin-12 and interleukin-15 on expansion of NK cell receptor-expressing CD8+ T cells. [Ann Hematol. 89: 115-20.](#)
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13. Matzner, P. *et al.* (2013) Resilience of the immune system in healthy young students to 30-hour sleep deprivation with psychological stress. [Neuroimmunomodulation. 20: 194-204.](#)
14. Tahrali, I. *et al.* (2019) CD3-CD56⁺ NK cells display an inflammatory profile in RR-MS patients. [Immunol Lett. Oct 04 \[Epub ahead of print\].](#)

Further Reading	1. 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 (16): 9452-7.
Storage	Store at +4°C or at -20°C if preferred. Storage in frost-free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. 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 #10040 available at: https://www.bio-rad-antibodies.com/SDS/MCA2405 10040
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Rabbit Anti Mouse IgG (STAR12...)	RPE
Goat Anti Mouse IgG IgA IgM (STAR87...)	HRP
Goat Anti Mouse IgG (STAR76...)	RPE
Goat Anti Mouse IgG (STAR70...)	FITC

Rabbit Anti Mouse IgG (STAR13...)	HRP
Goat Anti Mouse IgG (Fc) (STAR120...)	FITC , HRP
Rabbit Anti Mouse IgG (STAR9...)	FITC
Goat Anti Mouse IgG (STAR77...)	HRP
Goat Anti Mouse IgG (H/L) (STAR117...)	Alk. Phos. , DyLight®488 , DyLight®550 , DyLight®650 , DyLight®680 , DyLight®800 , FITC , HRP

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL \(MCA928\)](#)

North & South America	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com	Worldwide	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com	Europe	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com
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To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets
'M366826:200529'

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