

Datasheet: MCA2405A647

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| Description: | MOUSE ANTI HUMAN CD314:Alexa Fluor® 647 |
| Specificity: | CD314 |
| Other names: | NKG2D |
| Format: | ALEXA FLUOR® 647 |
| Product Type: | Monoclonal Antibody |
| Clone: | 1D11 |
| Isotype: | IgG1 |
| Quantity: | 100 TESTS/1ml |

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 - 1/10 |

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.

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|---------------------------------------|---|----------------------------|--------------------------|
| Target Species | Human | | |
| Product Form | Purified IgG conjugated to Alexa Fluor® 647- liquid | | |
| Max Ex/Em | Fluorophore | Excitation Max (nm) | Emission Max (nm) |
| | Alexa Fluor®647 | 650 | 665 |
| 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 | | |
| Approx. Protein Concentrations | IgG concentration 0.05 mg/ml | | |

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| 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_567175 |
| 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 |

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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 This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended. This product is photosensitive and should be protected from light.

Guarantee 12 months from date of despatch

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Health And Safety Information Material Safety Datasheet documentation #10041 available at: <https://www.bio-rad-antibodies.com/SDS/MCA2405A647>
10041

Regulatory For research purposes only

Related Products

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:Alexa Fluor® 647 \(MCA928A647\)](#)

Recommended Useful Reagents

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

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

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