# Datasheet: MCA2503A647

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| **Description:** | MOUSE ANTI HUMAN CD49d:Alexa Fluor® 647 |
| **Specificity:** | CD49d |
| **Other names:** | INTEGRIN ALPHA 4 CHAIN, VLA-4 |
| **Format:** | ALEXA FLUOR® 647 |
| **Product Type:** | Monoclonal Antibody |
| **Clone:** | Bu49 |
| **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 |

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

**Species Cross Reactivity**

Reacts with: Dog

**N.B.** Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

**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 A from tissue culture supernatant

**Buffer Solution**

Phosphate buffered saline

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| **Preservative Stabilisers** | 0.09% Sodium Azide ($NaN_3$)<br>1% Bovine Serum Albumin |
| **Approx. Protein Concentrations** | IgG concentration 0.05 mg/ml |
| **Immunogen** | Hyatt myeloma cell line. |
| **External Database Links** | **UniProt:**<br>P13612 Related reagents<br><br>**Entrez Gene:**<br>3676 ITGA4 Related reagents |
| **Synonyms** | CD49D |
| **Fusion Partners** | Cells from immunized mice were fused with cells of the NS0 myeloma cell line. |
| **Specificity** | **Mouse anti Human CD49d monoclonal antibody, clone Bu49** recognizes human CD49d, also known as integrin alpha 4 or VLA-4 alpha subunit. CD49d is a ~150 kDa single pass type I transmembrane glycoprotein. CD49d can be proteolytically cleaved to yield fragments of ~80 and ~70 kDa (Hemler *et al.* 1987). CD49d associates with either CD29 to form VLA-4 or with Integrin beta-7 to form The Peyer's patches-specific homing receptor LPAM-1, involved in the lymphocyte migration and homing to gut-associated lymphoid tissue (Sackstein 2006) through its interaction with MadCam-1, preferentially expressed on Peyer's patch high endothelial venules and postcapillary venules in lamina propria (Briskin *et al.* 1997).<br><br>CD49d is expressed on a broad range of cells including lymphocytes, monocytes, eosinophils and thymocytes. CD49d expression may serve as a prognostic parker of survival and disease progression in patients with chronic lymphocytic leukemia and may have therapeutic potential (Bulian *et al.* 2008).<br><br>Mouse anti human CD49, clone Bu49 cross-reacts with the canine B-cell leukemia cell line GL-1 and induces homotypic cell aggregation (Ikewaki *et al.* 2010). |
| **Flow Cytometry** | Use 10ul of the suggested working dilution to label $1x10^6$ cells in 100ul |
| **References** | 1. Oxford University Press. (1995) Leucocyte Typing V. White cell differentiation antigens. Volume Two. p 1617-8.<br>2. Skibinski, G. *et al.* (1998) Tonsil stromal-cell lines expressing FDC-like properties: isolation, characterization, and interaction with B lymphocytes. Dev Immunol. 6 (3-4): 273-84.<br>3. Ikewaki, N. *et al.* (2010) Anti-human very late antigen-alpha4 (CD49d) monoclonal antibody (BU49) cross-reacts with the canine B-cell leukemia cell line GL-1, resulting in the induction of homotypic cell aggregation. Cell Immunol. 263: 55-64.<br>4. Hamilton, E. *et al.* (2012) Mimicking the tumour microenvironment: three different |

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| | co-culture systems induce a similar phenotype but distinct proliferative signals in primary chronic lymphocytic leukaemia cells. Br J Haematol. 158: 589-99. |
| **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.<br><br>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/MCA2503A647<br>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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