

## Datasheet: MCA2025

<b>Description:</b>	MOUSE ANTI HUMAN CD49b
<b>Specificity:</b>	CD49b
<b>Other names:</b>	INTEGRIN ALPHA 2 CHAIN, VLA-2
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	16B4
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	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](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			30ug/ml
Immunohistology - Frozen	▪			30ug/ml - 40ug/ml
Immunohistology - Paraffin (1)	▪			
ELISA	▪			10ug/ml
Immunoprecipitation	▪			25ug/ml - 50ug/ml
Western Blotting	▪			
Immunofluorescence	▪			
Functional Assays (2)	▪			

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.

**(1) This product requires antigen retrieval using heat treatment prior to staining of paraffin sections.**

**Tris/EDTA pH9.0 is recommended for this purpose.**

**(2) This product contains sodium azide, removal by dialysis is recommended prior to use in functional assays. Dialysis cassettes [EQU003](#) are suitable for this purpose.**

<b>Target Species</b>	Human
<b>Species Cross Reactivity</b>	Does not react with:Rat
<b>Product Form</b>	Purified IgG - liquid
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
<b>Buffer Solution</b>	Phosphate buffered saline

<b>Preservative Stabilisers</b>	0.09% Sodium Azide
<b>Carrier Free</b>	Yes
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml
<b>Immunogen</b>	Purified human beta 1 preparation from HT1080 fibrosarcoma cell extract.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P17301</a>   <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">3673</a>   ITGA2   <a href="#">Related reagents</a></p>
<b>Synonyms</b>	CD49B
<b>Fusion Partners</b>	Spleen cells from immunised BALB/c mice were fused with cells of the X63/Ag8.653 mouse myeloma cell line.
<b>Specificity</b>	<b>Mouse anti Human CD49b antibody, clone 16B4</b> recognizes human CD49b, also known as integrin $\alpha 2$ , collagen receptor, Platelet membrane glycoprotein Ia or VLA-2 subunit alpha. CD49b is a 1181 amino acid ~160kDa single pass type-1 transmembrane glycoprotein possessing multiple <a href="#">FG-GAP</a> repeats and a single <a href="#">VWFA</a> domain. Mouse anti human CD49b antibody, clone 16B4 is identified as capable of immunoprecipitating a non-reducible alpha subunit from I <sup>125</sup> surface labelled Human cell line extract. It is confirmed as specific to the alpha 2 subunit by relative expression of antigen on various cell lines by FACS, and its recognition of affinity purified alpha 2 beta 1 in dot blots.
<b>References</b>	<ol style="list-style-type: none"> <li>Fitter, S. <i>et al.</i> (1999) Transmembrane 4 superfamily protein CD151 (PETA-3) associates with beta 1 and alpha IIb beta 3 integrins in haemopoietic cell lines and modulates cell-cell adhesion. <a href="#">Biochem J. 338 ( Pt 1): 61-70.</a></li> <li>Sincock, P.M. <i>et al.</i> (1999) PETA-3/CD151, a member of the transmembrane 4 superfamily, is localised to the plasma membrane and endocytic system of endothelial cells, associates with multiple integrins and modulates cell function. <a href="#">J Cell Sci. 112 ( Pt 6): 833-44.</a></li> <li>Eaton, C.L. <i>et al.</i> (2010) Evaluation of the frequency of putative prostate cancer stem cells in primary and metastatic prostate cancer. <a href="#">Prostate. 70 (8): 875-82.</a></li> <li>Gassmann, P. <i>et al.</i> (2009) CXCR4 regulates the early extravasation of metastatic tumor cells in vivo. <a href="#">Neoplasia. 11: 651-61.</a></li> <li>Gassmann, P. <i>et al.</i> (2010) <i>In vivo</i> tumor cell adhesion in the pulmonary microvasculature is exclusively mediated by tumor cell-endothelial cell interaction. <a href="#">BMC Cancer. 10: 177.</a></li> <li>Ivaska, J. <i>et al.</i> (2005) PKCepsilon-mediated phosphorylation of vimentin controls integrin recycling and motility. <a href="#">EMBO J. 24: 3834-45.</a></li> <li>Pellinen, T. <i>et al.</i> (2006) Small GTPase Rab21 regulates cell adhesion and controls endosomal traffic of beta1-integrins. <a href="#">J Cell Biol. 173: 767-80.</a></li> <li>Upla, P. <i>et al.</i> (2004) Clustering induces a lateral redistribution of alpha 2 beta 1 integrin from membrane rafts to caveolae and subsequent protein kinase C-dependent internalization. <a href="#">Mol Biol Cell. 15: 625-36.</a></li> <li>Jokinen, J. <i>et al.</i> (2010) Molecular mechanism of alpha2beta1 integrin interaction with human echovirus 1. <a href="#">EMBO J. 29: 196-208.</a></li> <li>Offerdinger, M. <i>et al.</i> (2003) Heregulin and retinoids synergistically induce branching</li> </ol>

- morphogenesis of breast cancer cells cultivated in 3D collagen gels. [J Cell Physiol. 195: 260-75.](#)
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18. Poulter, N.S. *et al.* (2017) Clustering of glycoprotein VI (GPVI) dimers upon adhesion to collagen as a mechanism to regulate GPVI signaling in platelets. [J Thromb Haemost. 15 \(3\): 549-564.](#)

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**Storage**

Store at +4°C or at -20°C if preferred.

This product should be stored undiluted.

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.

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**Shelf Life**

18 months from date of despatch.

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**Health And Safety Information**

Material Safety Datasheet documentation #10040 available at: 10040: <https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf>

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**Regulatory**

For research purposes only

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## Related Products

### Recommended Secondary Antibodies

- Goat Anti Mouse IgG (STAR76...) [RPE](#)
- Goat Anti Mouse IgG IgA IgM (STAR87...) [Alk. Phos.](#), [HRP](#)
- Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight@488](#), [DyLight@549](#), [DyLight@649](#), [DyLight@680](#), [DyLight@800](#), [FITC](#), [HRP](#)
- Rabbit Anti Mouse IgG (STAR9...) [FITC](#)
- Goat Anti Mouse IgG (STAR77...) [HRP](#)
- Rabbit Anti Mouse IgG (STAR12...) [RPE](#)
- Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)
- Rabbit Anti Mouse IgG (STAR8...) [DyLight@800](#)
- Goat Anti Mouse IgG (STAR70...) [FITC](#)
- Rabbit Anti Mouse IgG (STAR13...) [HRP](#)
- Human Anti Mouse IgG1 (HCA036...) [HRP](#)

## Recommended Negative Controls

### MOUSE IgG1 NEGATIVE CONTROL (MCA928)

**North & South** Tel: +1 800 265 7376

**America** Fax: +1 919 878 3751

Email: [antibody\\_sales\\_us@bio-rad.com](mailto: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](mailto:antibody_sales_uk@bio-rad.com)

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