

Datasheet: MCA2025

Description:	MOUSE ANTI HUMAN CD49b	
Specificity:	CD49b	
Other names:	INTEGRIN ALPHA 2 CHAIN, VLA-2	
Format:	Purified	
Product Type:	Monoclonal Antibody	
Clone:	16B4	
Isotype:	lgG1	
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 <a href="www.bio-rad-antibodies.com/protocols">www.bio-rad-antibodies.com/protocols</a>.

	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 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.

(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.

Target Species	Human
Species Cross	Does not react with:Rat

Reactivity	
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 (NaN <sub>3</sub> )
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	Purified human beta 1 preparation from HT1080 fibrosarcoma cell extract
External Database Links	UniProt:  P17301 Related reagents  Entrez Gene:  3673 ITGA2 Related reagents
Synonyms	CD49B
RRID	AB_321444
Fusion Partners	Spleen cells from immunized BALB/c mice were fused with cells of the X63/Ag8.653 mouse myeloma cell line
Specificity	Mouse anti Human CD49b antibody, clone 16B4 recognizes human CD49b, also known as integrin α2, collagen receptor, Platelet membrane glycoprotein la or VLA-2 subunit alpha. CD49b is a 1181 amino acid ~160 kDa single pass type-1 transmembrane glycoprotein possessing multiple <u>FG-GAP</u> repeats and a single <u>VWFA</u> 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 labeled 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.
References	1. 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. <u>Biochem J. 338 ( Pt 1): 61-70.</u>

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- 4. Gassmann, P. *et al.* (2009) CXCR4 regulates the early extravasation of metastatic tumor cells in vivo. Neoplasia. 11: 651-61.
- 5. Gassmann, P. *et al.* (2010) *In vivo* tumor cell adhesion in the pulmonary microvasculature is exclusively mediated by tumor cell--endothelial cell interaction. <u>BMC Cancer. 10: 177.</u>
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- 9. Jokinen, J. *et al.* (2010) Molecular mechanism of alpha2beta1 integrin interaction with human echovirus 1. EMBO J. 29: 196-208.
- 10. Offterdinger, M. *et al.* (2003) Heregulin and retinoids synergistically induce branching morphogenesis of breast cancer cells cultivated in 3D collagen gels. <u>J Cell Physiol. 195:</u> 260-75.
- 11. Connors, W.L. and Heino, J. (2005) A duplexed microsphere-based cellular adhesion assay. Anal Biochem. 337: 246-55.
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- 13. Vuoriluoto, K. *et al.* (2008) Syndecan-1 supports integrin alpha2beta1-mediated adhesion to collagen. Exp Cell Res. 314: 3369-81.
- 14. Holleran, B.J. *et al.* (2003) Differential recruitment of alpha2beta1 and alpha4beta1 integrins to lipid rafts in Jurkat T lymphocytes exposed to collagen type IV and fibronectin. <u>J Leukoc Biol. 73: 243-52.</u>
- 15. Rintanen, N. *et al.* (2012) Calpains promote  $\alpha 2\beta 1$  integrin turnover in nonrecycling integrin pathway. Mol Biol Cell. 23: 448-463.
- 16. Pietiäinen, V. *et al.* (2004) Echovirus 1 endocytosis into caveosomes requires lipid rafts, dynamin II, and signaling events. <u>Mol Biol Cell. 15: 4911-25.</u>
- 17. Kankaanpää, P. *et al.* (2015) Cellular recognition and macropinocytosis-like internalization of nanoparticles targeted to integrin α2β1. Nanoscale. 7 (42): 17889-901.
- 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. <u>J Thromb Haemost.</u> 15 (3): 549-564.

### 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.

### Guarantee

12 months from date of despatch

#### **Health And Safety**

Material Safety Datasheet documentation #10040 available at:

Information 10040: https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf

**Regulatory** For research purposes only

## Related Products

## **Recommended Secondary Antibodies**

Goat Anti Mouse IgG (STAR77...) <u>HRP</u>

Rabbit Anti Mouse IgG (STAR12...) RPE

Goat Anti Mouse IgG (STAR70...) FITC

Goat Anti Mouse IgG IgA IgM (STAR87...) Alk. Phos., HRP

Rabbit Anti Mouse IgG (STAR9...) <u>FITC</u>
Goat Anti Mouse IgG (STAR76...) RPE

Goat Anti Mouse IgG (H/L) (STAR117...) Alk. Phos., DyLight®488, DyLight®550,

DyLight®650, DyLight®680, DyLight®800,

FITC, HRP

Rabbit Anti Mouse IgG (STAR13...) HRP

Goat Anti Mouse IgG (Fc) (STAR120...) FITC, HRP

# **Recommended Negative Controls**

## MOUSE IgG1 NEGATIVE CONTROL (MCA928)

 North & South
 Tel: +1 800 265 7376
 Worldwide
 Tel: +44 (0)1865 852 700
 Europe
 Tel: +49 (0) 89 8090 95 21

 America
 Fax: +1 919 878 3751
 Fax: +44 (0)1865 852 739
 Fax: +49 (0) 89 8090 95 50

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets 'M412520:221112'

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