

Datasheet: MCA2025T

Description:	MOUSE ANTI HUMAN CD49b
Specificity:	CD49b
Other names:	INTEGRIN ALPHA 2 CHAIN, VLA-2
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	16B4
Isotype:	IgG1
Quantity:	25 µg

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	▪			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.

Target Species	Human
Species Cross Reactivity	Does not react with:Rat
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	Purified human beta 1 preparation from HT1080 fibrosarcoma cell extract.
External Database Links	<p>UniProt: P17301 Related reagents</p> <p>Entrez Gene: 3673 ITGA2 Related reagents</p>
Synonyms	CD49B
Fusion Partners	Spleen cells from immunised 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 $\alpha 2$, 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 FG-GAP repeats and a single VWFA domain. Mouse anti human CD49b antibody, clone 16B4 is identified as capable of immunoprecipitating a non-reducible alpha subunit from I ¹²⁵ 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.
References	<ol style="list-style-type: none"> 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. Biochem J. 338 (Pt 1): 61-70. 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. J Cell Sci. 112 (Pt 6): 833-44. Eaton, C.L. <i>et al.</i> (2010) Evaluation of the frequency of putative prostate cancer stem cells in primary and metastatic prostate cancer. Prostate. 70 (8): 875-82. Gassmann, P. <i>et al.</i> (2009) CXCR4 regulates the early extravasation of metastatic tumor cells in vivo. Neoplasia. 11: 651-61. 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. BMC Cancer. 10: 177. Ivaska, J. <i>et al.</i> (2005) PKCepsilon-mediated phosphorylation of vimentin controls integrin recycling and motility. EMBO J. 24: 3834-45. Pellinen, T. <i>et al.</i> (2006) Small GTPase Rab21 regulates cell adhesion and controls endosomal traffic of beta1-integrins. J Cell Biol. 173: 767-80. 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. Mol Biol Cell. 15: 625-36. Jokinen, J. <i>et al.</i> (2010) Molecular mechanism of alpha2beta1 integrin interaction with human echovirus 1. EMBO J. 29: 196-208. Offerdinger, M. <i>et al.</i> (2003) Heregulin and retinoids synergistically induce branching

- morphogenesis of breast cancer cells cultivated in 3D collagen gels. [J Cell Physiol. 195: 260-75.](#)
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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.

Shelf Life

18 months from date of despatch.

Health And Safety Information

Material Safety Datasheet documentation #10040 available at: 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 (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)

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Europe

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