

Datasheet: MCA2298PE

Description:	HAMSTER ANTI MOUSE CD29:RPE
Specificity:	CD29
Other names:	INTEGRIN BETA 1 CHAIN
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	HM beta 1-1
Isotype:	IgG
Quantity:	100 TESTS

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 - 1/5

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.

Target Species	Mouse		
Species Cross Reactivity	Reacts with: Rat N.B. Antibody reactivity and working conditions may vary between species.		
Product Form	Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized		
Reconstitution	Reconstitute with 1.0 ml distilled water		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	RPE 488nm laser	496	578
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant		
Buffer Solution	Phosphate buffered saline		
Preservative	0.09% Sodium Azide		
Stabilisers	1%	Bovine Serum Albumin	
	5%	Sucrose	
Immunogen	Purified mouse VLA-4 antigen.		

**External Database
Links**

UniProt:

[P09055](#)

[Related reagents](#)

Entrez Gene:

[16412](#)

Itgb1

[Related reagents](#)

Fusion Partners

Spleen cells from immunized Armenian hamsters were fused with cells of the P3U1 mouse myeloma cell line.

Specificity

Hamster anti Mouse CD29 antibody, clone HM beta 1-1 recognizes the murine integrin beta 1 subunit (CD29), a ~110 kDa cell surface glycoprotein that is widely expressed by a variety of cells including all leucocytes. CD29 forms non-covalent bonds with the integrin alpha subunits, including CD51 and CD49a-f, to form heterodimers. The ligands for these heterodimers include collagen, fibronectin, laminin and vascular adhesion molecule-1. In the immune system beta 1 integrins play an important role in cell adhesion, migration, activation and differentiation.

Hamster anti Mouse CD29 antibody, clone HM beta 1-1 is reported to inhibit beta 1 integrin mediated adhesion ([Noto *et al.* 1995](#)).

Flow Cytometry

Use 10ul of the suggested working dilution to label 10⁶ cells in 100ul.

The Fc region of monoclonal antibodies may bind non-specifically to cells expressing low affinity Fc receptors. This may be reduced by using SeroBlock FcR ([BUF041A/B](#)).

References

1. Noto, K. *et al.* (1995) Identification and functional characterization of mouse CD29 with a mAb. [Int Immunol. 7 \(5\): 835-42.](#)
2. Lu, T.Y. *et al.* (2010) Epithelial cell adhesion molecule regulation is associated with the maintenance of the undifferentiated phenotype of human embryonic stem cells. [J Biol Chem. 285: 8719-32.](#)
3. Li S *et al.* (2010) Upregulation of CXCR4 favoring neural-like cells migration via AKT activation. [Neurosci Res. 67 \(4\): 293-9.](#)
4. Eto, D.S. *et al.* (2007) Integrin-mediated host cell invasion by type 1-piliated uropathogenic Escherichia coli. [PLoS Pathog. 3: e100.](#)
5. Tiede, B.J. *et al.* (2009) A novel mouse model for non-invasive single marker tracking of mammary stem cells in vivo reveals stem cell dynamics throughout pregnancy. [PLoS One. 4 \(11\): e8035.](#)
6. Kouros-Mehr H (2008) GATA-3 links tumor differentiation and dissemination in a luminal breast cancer model. [Cancer Cell. 13: 141-52.](#)
7. Xu, L. *et al.* (2017) Umbilical cord-derived mesenchymal stem cells on scaffolds facilitate collagen degradation via upregulation of MMP-9 in rat uterine scars. [Stem Cell Res Ther. 8 \(1\): 84.](#)

Storage

Store at +4°C.

DO NOT FREEZE

This product should be stored undiluted. This product is photosensitive and should be protected from light.

Shelf Life

12 months from date of reconstitution.

**Health And Safety
Information**

Material Safety Datasheet documentation #10075 available at:
10075: <https://www.bio-rad-antibodies.com/uploads/MSDS/10075.pdf>

Related Products

Recommended Negative Controls

[HAMSTER \(ARMENIAN\) IgG NEGATIVE CONTROL:RPE \(MCA2356PE\)](#)

Recommended Positive Controls

[HAMSTER \(ARMENIAN\) IgG NEGATIVE CONTROL:RPE \(MCA2356PE\)](#)

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