

Datasheet: MCA2298FT

Description:	HAMSTER ANTI MOUSE CD29:FITC
Specificity:	CD29
Other names:	INTEGRIN BETA 1 CHAIN
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	HM beta 1-1
Isotype:	IgG
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	■			Neat - 1/10

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 Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	FITC	490	525
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		
Approx. Protein Concentrations	IgG concentration 0.1 mg/ml		
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.](#)
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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. This product is photosensitive and should be protected from light.

Avoid repeated freezing and thawing as this may denature the antibody.

Shelf Life

18 months from date of despatch.

Health And Safety Information Material Safety Datasheet documentation #10041 available at:
10041: <https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf>

Regulatory For research purposes only

Related Products

Recommended Negative Controls

[HAMSTER \(ARMENIAN\) IgG NEGATIVE CONTROL:FITC \(MCA2356F\)](#)

Recommended Useful Reagents

[MOUSE SEROBLOCK FcR \(BUF041A\)](#)

[MOUSE SEROBLOCK FcR \(BUF041B\)](#)

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