

Datasheet: MCA2298PE

BATCH NUMBER 170192

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 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.

Target Species	Mouse		
Species Cross Reactivity	Reacts with: Rat N.B. Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.		
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 Stabilisers	0.09% sodium azide (NaN ₃) 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
RRID	AB_566690
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 10µl of the suggested working dilution to label 10 ⁶ cells in 100µl. The Fc region of monoclonal antibodies may bind to cells expressing low affinity Fc receptors. This may be reduced by using SeroBlock FcR (BUF041A / BUF041B).
References	1. Eto, D.S. <i>et al.</i> (2007) Integrin-mediated host cell invasion by type 1-piliated uropathogenic Escherichia coli. PLoS Pathog. 3: e100. 2. Kouros-Mehr H (2008) GATA-3 links tumor differentiation and dissemination in a luminal breast cancer model. Cancer Cell. 13: 141-52. 3. Tiede, B.J. <i>et al.</i> (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. 4. Li S <i>et al.</i> (2010) Upregulation of CXCR4 favoring neural-like cells migration via AKT activation. Neurosci Res. 67 (4): 293-9. 5. Lu, T.Y. <i>et al.</i> (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.](#)

6. 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.](#)

7. Hou, B. *et al.* (2018) Comparison of the Effects of BMSC-derived Schwann Cells and Autologous Schwann Cells on Remyelination Using a Rat Sciatic Nerve Defect Model. [Int J Biol Sci. 14 \(13\): 1910-1922.](#)

8. Porwal, K. *et al.* (2019) Increased bone marrow-specific adipogenesis by clofazimine causes impaired fracture healing, osteopenia and osteonecrosis without extra-skeletal effects in rats. [Toxicol Sci. kzf172.](#)

9. Zhu, C. *et al.* (2020) Antinociceptive effect of intrathecal injection of miR-9-5p modified mouse bone marrow mesenchymal stem cells on a mouse model of bone cancer pain. [J Neuroinflammation. 17 \(1\): 85.](#)

10. Farahat, M. *et al.* (2022) Mechanotransductive Mechanisms of Biomimetic Hydrogel Cues Modulating Meckel's Cartilage Degeneration. [Adv Biol \(Weinh\). 2022: e2101315.](#)

11. Zbinden, A. *et al.* (2021) Nidogen-1 Mitigates Ischemia and Promotes Tissue Survival and Regeneration. [Adv Sci \(Weinh\). 8 \(4\): 2002500.](#)

12. Chaker, D. *et al.* (2024) Direct Reprogramming of Hepatocytes Into JAK/Stat-Dependent LGR5+ Liver Cells Able to Initiate Intrahepatic Cholangiocarcinoma. [Stem Cells. 42 \(4\): 301-316.](#)

Storage	Store at +4°C. DO NOT FREEZE This product should be stored undiluted. This product is photosensitive and should be protected from light.
Guarantee	12 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #20487 available at: https://www.bio-rad-antibodies.com/SDS/MCA2298PE
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

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

Recommended Positive Controls

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

Product inquiries: www.bio-rad-antibodies.com/technical-support

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

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