

Datasheet: MCA2298F

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:	0.1 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 www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			Neat - 1/10

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 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 Stabilisers	0.09% sodium azide (NaN ₃) 1% bovine serum albumin
Approx. Protein Concentrations	IgG concentration 0.1 mg/ml
Immunogen	Purified mouse VLA-4 antigen.
External Database Links	<p>UniProt: P09055 Related reagents</p> <p>Entrez Gene: 16412 Itgb1 Related reagents</p>
RRID	AB_566688
Fusion Partners	Spleen cells from immunized Armenian hamsters were fused with cells of the P3U1 mouse myeloma cell line.
Specificity	<p>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.</p> <p>Hamster anti Mouse CD29 antibody, clone HM beta 1-1 is reported to inhibit beta 1 integrin mediated adhesion (Noto et al. 1995).</p>
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	<ol style="list-style-type: none"> Eto, D.S. <i>et al.</i> (2007) Integrin-mediated host cell invasion by type 1-piliated uropathogenic Escherichia coli. PLoS Pathog. 3: e100. Kouros-Mehr H (2008) GATA-3 links tumor differentiation and dissemination in a luminal breast cancer model. Cancer Cell. 13: 141-52. 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. Li S <i>et al.</i> (2010) Upregulation of CXCR4 favoring neural-like cells migration via AKT activation. Neurosci Res. 67 (4): 293-9. 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. Xu, L. <i>et al.</i> (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. kfz172.](#)

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

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. 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 #10041 available at: <https://www.bio-rad-antibodies.com/SDS/MCA2298F>
10041

Regulatory

For research purposes only

Related Products

Recommended Negative Controls

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

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Europe

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

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