Datasheet: MCA2298A488

Description:	HAMSTER ANTI MOUSE CD29:Alexa Fluor® 488
Specificity:	CD29
Other names:	INTEGRIN BETA 1 CHAIN
Format:	ALEXA FLUOR® 488
Product Type:	Monoclonal Antibody
Clone:	HM beta 1-1
Isotype:	IgG
Quantity:	100 TESTS/1ml

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 Alexa Fluor®488 - liquid

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
Alexa Fluor®488	495	519

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
1% Bovine Serum Albumin

Approx. Protein Concentrations

IgG concentration 0.05 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 10^6 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^{o}C or at -20^{o}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.

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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:Alexa Fluor® 488 (MCA2356A488)

Recommended Useful Reagents

MOUSE SEROBLOCK FcR (BUF041A)
MOUSE SEROBLOCK FcR (BUF041B)

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