

Datasheet: MCA2872GA

Description:	MOUSE ANTI RAT CD49d
Specificity:	CD49d
Other names:	INTEGRIN ALPHA 4 CHAIN, VLA-4
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	MRalpha4-1
Isotype:	IgG2a
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	■			1/25 - 1/200
Immunohistology - Frozen			■	
Immunohistology - Paraffin			■	
ELISA			■	
Immunoprecipitation	■			
Western Blotting			■	

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	Rat
Product Form	Purified IgG - liquid
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)
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0mg/ml
Immunogen	RBL-2H3 rat basophilic leukaemia cell line.

Fusion Partners	Spleen cells from immunised Balb/c mice were fused with cells of the P3U1 myeloma cell line.
Specificity	Mouse anti Rat CD49d monoclonal antibody, clone MRalpha4-1 recognizes rat CD49d, otherwise known as integrin alpha 4 chain/VLA-4, a ~150 kDa single pass type-1 transmembrane glycoprotein and member of the integrin alpha chain family, which acts as a receptor for fibronectin and CD106 (VCAM-1). CD49d is expressed broadly on T and B lymphocytes, monocytes, thymocytes, mast cells and dendritic cells and is involved in cell-cell interactions, mononuclear cell trafficking to sites of endothelial inflammation, and the adhesion of cells to the extracellular matrix. Clone MRalpha4-1 inhibits the <i>in vitro</i> and <i>in vivo</i> functions of CD49d (Yasuda <i>et al.</i> 1995). Studies have shown that in rat Peyer's patches, clone MRalpha4-1 inhibits the rolling and adherence of lymphocytes to postcapillary venules (PCV), and significantly inhibits the transendothelial migration of T lymphocytes (Tsuzuki <i>et al.</i> 1996).
Flow Cytometry	Use 10ul of the suggested working dilution to label 1x10 ⁶ cells in 100ul.
References	1. Yasuda, M. <i>et al.</i> (1995) Expression and function of fibronectin binding integrins on rat mast cells. Int Immunol. 7 (2): 251-8. 2. Tsuzuki Y <i>et al.</i> (1996) alpha 4 integrin plays a critical role in early stages of T lymphocyte migration in Peyer's patches of rats. Int Immunol. 8 (3): 287-95. 3. Summers, L. <i>et al.</i> (2013) Activation of brain endothelial cells by interleukin-1 is regulated by the extracellular matrix after acute brain injury. Mol Cell Neurosci. 57: 93-103.
Storage	Store at +4°C or at -20°C if preferred. Storage in frost-free freezers is not recommended. This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
Shelf Life	18 months from date of despatch.
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: 10040: https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR76...)	RPE
Goat Anti Mouse IgG IgA IgM (STAR87...)	Alk. Phos. , HRP
Goat Anti Mouse IgG (H/L) (STAR117...)	Alk. Phos. , DyLight®488 , DyLight®549 , DyLight®649 , DyLight®680 , DyLight®800 , FITC , HRP
Rabbit Anti Mouse IgG (STAR9...)	FITC
Goat Anti Mouse IgG (STAR77...)	HRP
Rabbit Anti Mouse IgG (STAR12...)	RPE
Goat Anti Mouse IgG (Fc) (STAR120...)	FITC , HRP
Rabbit Anti Mouse IgG (STAR8...)	DyLight®800

Goat Anti Mouse IgG (STAR70...) [FITC](#)
Human Anti Mouse IgG2a (HCA037...) [FITC](#), [HRP](#)
Rabbit Anti Mouse IgG (STAR13...) [HRP](#)

Recommended Negative Controls

[MOUSE IgG2a NEGATIVE CONTROL \(MCA1210\)](#)

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