Datasheet: MCA1230A647T

Description:	RAT ANTI MOUSE CD49d:Alexa Fluor® 647
Specificity:	CD49d
Other names:	INTEGRIN ALPHA 4 CHAIN, VLA-4
Format:	ALEXA FLUOR® 647
Product Type:	Monoclonal Antibody
Clone:	PS/2
Isotype:	IgG2b
Quantity:	25 TESTS/0.25ml

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

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: Human

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 Alexa Fluor® 647 - liquid

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
Alexa Fluor®647	650	665

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 0.05 mg/ml
Immunogen	P815 DBA/2 murine mastocytoma cells.
External Database Links	**UniProt:** Q00651 Related reagents **Entrez Gene:** 16401 Itga4 Related reagents
RRID	AB_1102148
Fusion Partners	Spleen cells from immunized Fisher rats were fused with SP2/0 mouse myeloma cells
Specificity	**Rat anti Mouse CD49d monoclonal antibody, clone PS/2** recognizes murine alpha 4 integrin (CD49d), a ~150 kDa single pass type I membrane glycoprotein that can associate with either beta 1 integrin (CD29) or beta 7 integrin to form heterodimers CD49d/CD29 (VLA-4) and alpha4/beta7 (LPAM-1) respectively (Holzmann *et al.* 1989). CD49d is expressed on most lymphocytes, granulocytes, monocytes and thymocytes. The primary ligands for CD49d are CD106 (VCAM-1), fibronectin and MAdCAM-1 (Sheppard *et al.* 1994). Clone PS/2 has also been reported to block the binding of CD49d to its ligands (Andrew *et al.* 1994).
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. Miyake, K. *et al.* (1991) Evidence for a role of the integrin VLA-4 in lympho-hemopoiesis. J Exp Med. 173 (3): 599-607. 2. Miyake, K. *et al.* (1991) A VCAM-like adhesion molecule on murine bone marrow stromal cells mediates binding of lymphocyte precursors in culture. J Cell Biol. 114 (3): 557-65. 3. Andrew, D.P. *et al.* (1994) Distinct but overlapping epitopes are involved in alpha 4 beta 7-mediated adhesion to vascular cell adhesion molecule-1, mucosal addressin-1, fibronectin, and lymphocyte aggregation. J Immunol. 153 (9): 3847-61. 4. Tchilian, E.Z. *et al.* (1997) Anti-alpha 4 integrin antibody induces apoptosis in murine thymocytes and staphylococcal enterotoxin B-activated lymph node T cells. Immunology. 92: 321-7. 5. Enghofer, M. *et al.* (1998) Lymphocyte transfer in streptozotocin-induced diabetes: adhesion of donor cells to islet endothelium. Am J Physiol. 274: E928-35. 6. Liu, Z.J. *et al.* (1999) A novel role for H-Ras in the regulation of very late antigen-4

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17. Gillberg, L. *et al.* (2013) Effective treatment of mouse experimental colitis by alpha 2 integrin antibody: comparison with alpha 4 antibody and conventional therapy. Acta Physiol (Oxf). 207: 326-36.
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19. Chung, K.J. *et al.* (2017) A self-sustained loop of inflammation-driven inhibition of beige adipogenesis in obesity. Nat Immunol. 18 (6): 654-64.

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

Acknowledgements

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Health And Safety Information	Material Safety Datasheet documentation #10041 available at: https://www.bio-rad-antibodies.com/SDS/MCA1230A647T 10041
Regulatory	For research purposes only

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