Datasheet: MCA699PB

Description:	RAT ANTI HUMAN CD49f:Pacific Blue®
Specificity:	CD49f
Other names:	INTEGRIN ALPHA 6 CHAIN, VLA-6
Format:	Pacific Blue®
Product Type:	Monoclonal Antibody
Clone:	NKI-GoH3
Isotype:	IgG2a
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

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

Human

Species Cross Reactivity

Reacts with: Mouse, Dog, Pig, Cynomolgus monkey, Sheep
N.B. Antibody reactivity and working conditions may vary between species.

Product Form

Purified IgG conjugated to Pacific Blue - liquid

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
Pacific Blue®	410	455

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

BALB/c mouse mammary tumor cells

External Database Links	**UniProt:** P23229 Related reagents **Entrez Gene:** 3655 ITGA6 Related reagents
Fusion Partners	Spleen cells from immunized Sprague-Dawley rats were fused with cells of the SP2/0 mouse myeloma cell line
Specificity	**Rat anti Human CD49f antibody, clone NKI-GoH3** recognizes CD49f, also known as the VLA-6 alpha chain. CD49f is a 1107 amino acid ~120 kDa cell surface glycoprotein that forms distinct complexes with CD29 (VLA beta-chain), resulting in the VLA-6 (alpha-6 beta-1) complex, expressed on human platelets, or with the beta-4 integrin resulting in the alpha-6 beta-4 complex expressed on various human epithelial cells. Rat anti Human CD49f antibody, clone NKI-GoH3 reacts with platelets, megakaryocytes, T lymphocytes and common acute lymphoblastic leukemia cells (alpha-6 beta-1). In immunohistology the monoclonal antibody reacts with epithelial cells of a variety of tissues, peripheral nerves, microvascular endothelial cells, placenta cyto- and syncytiotrophoblasts.VLA-6 is an important mediator of cell binding to laminin. Rat anti Human CD49f antibody, clone NKI-GoH3 blocks the binding of cells to the E8 fragment of laminin (Sonnenberg *et al.* 1998).
Flow Cytometry	Use 10ul of the suggested working dilution to label 10^6cells in 100ul
References	1. Jensen, K.B. *et al.* (2010) Assaying proliferation and differentiation capacity of stem cells using disaggregated adult mouse epidermis. Nat Protoc. 5 (5): 898-911. 2. Soligo, D. *et al.* (1989) Immunohistochemical reacitivy on bone marrow and tissues of anti-VLA antibodies in the platelet panel, in Leucocyte Typing IV: White Cell Differentiation Antigens. Edited by Knapp, W. *et al.* Oxford University Press p1029-1032. 3. Sonnenberg, A. *et al.* (1986) Development of mouse mammary gland: identification of stages in differentiation of luminal and myoepithelial cells using monoclonal antibodies and polyvalent antiserum against keratin. J Histochem Cytochem. 34 (8): 1037-46. 4. Sonnenberg, A. *et al.* (1987) A complex of platelet glycoproteins Ic and IIa identified by a rat monoclonal antibody. J Biol Chem. 262 (21): 10376-83. 5. Hemler, M.E. *et al.* (1988) Multiple very late antigen (VLA) heterodimers on platelets. Evidence for distinct VLA-2, VLA-5 (fibronectin receptor), and VLA-6 structures. J Biol Chem. 263 (16): 7660-5. 6. Galkowska, H. *et al.* (1996) Reactivity of antibodies directed against human antigens with surface markers on canine leukocytes. Vet Immunol Immunopathol. 53 (3-4): 329-34. 7. Sonnenberg, A. *et al.* (1988) Laminin receptor on platelets is the integrin VLA-6. Nature. 336 (6198): 487-9. 8. Sonnenberg, A. *et al.* (1990) Integrin recognition of different cell-binding fragments of laminin (P1, E3, E8) and evidence that alpha 6 beta 1 but not alpha 6 beta 4 functions as a major receptor for fragment E8. J Cell Biol. 110 (6): 2145-55. 9. Yoshino, N. *et al.* (2000) Upgrading of flow cytometric analysis for absolute counts, cytokines and other antigenic molecules of cynomolgus monkeys (*Macaca fascicularis*) by using anti-human cross-reactive antibodies. Exp Anim. 49 (2): 97-110. 10. Sonnenberg, A. *et al.* (1990) The alpha 6 beta 1 (VLA-6) and alpha 6 beta 4 protein complexes: tissue distribution and biochemical properties. J Cell Sci. 96 (Pt 2): 207-17. 11. Sonnenberg, A. *et al.* (1988) Identification and characterization of a novel antigen complex on

mouse mammary tumor cells using a monoclonal antibody against platelet glycoprotein Ic. J Biol Chem. 263 (28): 14030-8.
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13. Anderson, C. *et al.* (2009) Sonic hedgehog-dependent synthesis of laminin alpha1 controls basement membrane assembly in the myotome. Development. 136: 3495-504.
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15. Moreira, M. L. *et al.* (2016) Vaccination against canine leishmaniosis increases the phagocytic activity, nitric oxide production and expression of cell activation/migration molecules in neutrophils and monocytes. Veterinary Parasitology. 15 Feb [Epub ahead of print]
16. Mastrogiannaki M *et al.* (2016) β-catenin stabilization in skin fibroblasts causes fibrotic lesions by preventing adipocyte differentiation of the reticular dermis. J Invest Dermatol. pii: S0022-202X(16)00489-9. [Epub ahead of print]
17. Schäfer, G. *et al.* (2013) The role of inflammation in HPV infection of the Oesophagus. BMC Cancer. 13: 185.
18. Peuhu. E, *et al.* (2017) Integrin beta 1 inhibition alleviates the chronic hyperproliferative dermatitis phenotype of SHARPIN-deficient mice PLOS ONE. 12 (10): e0186628.
19. Rayagiri, S.S. *et al.* (2018) Basal lamina remodeling at the skeletal muscle stem cell niche mediates stem cell self-renewal. Nat Commun. 9 (1): 1075.

Further Reading	1. Piriou-Guzylack, L. (2008) Membrane markers of the immune cells in swine: an update. Vet Res. 39: 54.
Storage	Store at +4ºC or at -20ºC if preferred. Storage in frost-free freezers is not recommended. This product should be stored undiluted. This product is photosensitive and should be protected from light. 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
Acknowledgements	This product is provided under an intellectual property licence from Life Technologies Corporation. The transfer of this product is contingent on the buyer using the purchased product solely in research, excluding contract research or any fee for service research, and the buyer must not sell or otherwise transfer this product or its components for (a) diagnostic, therapeutic or prophylactic purposes; (b) testing, analysis or screening services, or information in return for compensation on a per-test basis; (c) manufacturing or quality assurance or quality control, or (d) resale, whether or not resold for use in research. For information on purchasing a license to this product for purposes other than as described above, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad CA 92008 USA or outlicensing@thermofisher.com
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

RAT IgG2a NEGATIVE CONTROL:PacificBlue® (MCA6005PB)

Recommended Useful Reagents

HUMAN SEROBLOCK (BUF070A)
HUMAN SEROBLOCK (BUF070B)

North & South America	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com	**Worldwide**	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com	**Europe**	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com

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