

Datasheet: MCA699PET

Description:	RAT ANTI HUMAN CD49f:RPE
Specificity:	CD49f
Other names:	INTEGRIN ALPHA 6 CHAIN, VLA-6
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	NKI-GoH3
Isotype:	lgG2a
Quantity:	25 TESTS

# **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 <a href="https://www.bio-rad-antibodies.com/protocols">www.bio-rad-antibodies.com/protocols</a>.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	-			Neat - 1/5

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 systems using appropriate negitive/positive controls.

Target Species	Human			
Species Cross Reactivity	Reacts with: Mouse, I  N.B. Antibody reactivi		s monkey, Sheep ions may vary between s	species.
Product Form	Purified IgG conjugate	ed to R. Phycoerythrin	n (RPE) - lyophilized	
Reconstitution	Reconstitute in 0.25 n	nl disilled water		
Max Ex/Em	Fluorophore RPE 488nm laser	Excitation Max (nm) 496	Emission Max (nm)	
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supe			tissue culture supernatant.
Buffer Solution	Phosphate buffered sa	aline		
Preservative	0.09% Sodium Azide			
Stabilisers	<ul><li>1% Bovine Serum</li><li>5% Sucrose</li></ul>	Albumin		
Immunogen	BALB/c mouse mamm	nary 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 syncytotrophoblasts.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 10 $\mathrm{ul}$  of the suggested working dilution to label  $10^6$  platelets in 100 $\mathrm{ul}$ .

### References

- 1. Jensen, K.B. *et al.* (2010) Assaying proliferation and differentiation capacity of stem cells using disaggregated adult mouse epidermis. <u>Nat Protoc. 5 (5): 898-911.</u>
- 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. <u>J Histochem Cytochem.</u> 34 (8): 1037-46.
- 4. Sonnenberg, A. *et al.* (1987) A complex of platelet glycoproteins Ic and IIa identified by a rat monoclonal antibody. <u>J Biol Chem. 262 (21): 10376-83.</u>
- 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. <u>J Biol Chem. 263 (16):</u> 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. <u>Nature. 336</u> (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. <u>J Cell Sci. 96 ( Pt 2): 207-17.</u>
- 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. <u>J Biol Chem. 263 (28): 14030-8.</u>

- 12. Le Bellego, F. *et al.* (2005) Cytoskeleton reorganization mediates alpha6beta1 integrinassociated actions of laminin on proliferation and survival, but not on steroidogenesis of ovine granulosa cells. Reprod Biol Endocrinol. 3: 19.
- 13. Anderson, C. *et al.* (2009) Sonic hedgehog-dependent synthesis of laminin alpha1 controls basement membrane assembly in the myotome. <u>Development</u>. 136: 3495-504.
- 14. Collins, C.A. *et al.* (2011) Reprogramming adult dermis to a neonatal state through epidermal activation of β-catenin <u>Development.138: 5189-99.</u>
- 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)  $\beta$ -catenin stabilization in skin fibroblasts causes fibrotic lesions by preventing adipocyte differentiation of the reticular dermis. <u>J Invest Dermatol. pii:</u> 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. <u>BMC</u> Cancer. 13: 185.
- 18. Peuhu. E, *et al.* (2017) Integrin beta 1 inhibition alleviates the chronic hyperproliferative dermatitis phenotype of SHARPIN-deficient mice <u>PLOS ONE. 12 (10): e0186628.</u>
- 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. <u>Vet Res.</u> 39: 54.
Storage	Prior to reconstitution store at +4°C. Following reconstitution store at +4°C.
	DO NOT FREEZE.
	This product should be stored undiluted. This product is photosensitive and should be protected from light. Should this product contain a precipitate we recommend microcentrifugation before use.
Shalf Life	12 months from date of reconstitution

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Health And Safety Information	Material Safety Datasheet documentation #10075 available at: 10075: https://www.bio-rad-antibodies.com/uploads/MSDS/10075.pdf
Regulatory	For research purposes only

# Related Products

# **Recommended Negative Controls**

RAT IgG2a NEGATIVE CONTROL:RPE (MCA6005PE)

## Recommended Useful Reagents

HUMAN SEROBLOCK (BUF070A) HUMAN SEROBLOCK (BUF070B)

North & South Tel: +1 800 265 7376

America Fax: +1 919 878 3751

Worldwide

Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Europe

Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50

Email: antibody\_sales\_uk@bio-rad.com

Email: antibody\_sales\_de@bio-rad.com

Email: antibody\_sales\_us@bio-rad.com

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