

## Datasheet: MCA699

<b>Description:</b>	RAT ANTI HUMAN CD49f
<b>Specificity:</b>	CD49f
<b>Other names:</b>	INTEGRIN ALPHA 6 CHAIN, VLA-6
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	NKI-GoH3
<b>Isotype:</b>	IgG2a
<b>Quantity:</b>	0.2 mg

## Product Details

**RRID** AB\_321462

**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](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			1/50 - 1/200
Immunohistology - Frozen	▪			
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting			▪	
Immunofluorescence	▪			

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. It is recommended that the user titrates the antibody 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 - 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

**Carrier Free** Yes

<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml
<b>Immunogen</b>	BALB/c mouse mammary tumor cells
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P23229</a>   <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">3655</a>   ITGA6   <a href="#">Related reagents</a></p>
<b>Fusion Partners</b>	Spleen cells from immunized Sprague-Dawley rats were fused with cells of the SP2/0 mouse myeloma cell line
<b>Specificity</b>	<p><b>Rat anti Human CD49f antibody, clone NKI-GoH3</b> 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.</p> <p>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.</p> <p>Rat anti Human CD49f antibody, clone NKI-GoH3 blocks the binding of cells to the E8 fragment of laminin (<a href="#">Sonnenberg et al. 1998</a>).</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> platelets in 100ul.
<b>Histology Positive Control Tissue</b>	Human Tonsil
<b>References</b>	<ol style="list-style-type: none"> <li>Jensen, K.B. <i>et al.</i> (2010) Assaying proliferation and differentiation capacity of stem cells using disaggregated adult mouse epidermis. <a href="#">Nat Protoc. 5 (5): 898-911.</a></li> <li>Soligo, D. <i>et al.</i> (1989) Immunohistochemical reactivity 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. <i>et al.</i> Oxford University Press p1029-1032.</li> <li>Sonnenberg, A. <i>et al.</i> (1986) Development of mouse mammary gland: identification of stages in differentiation of luminal and myoepithelial cells using monoclonal antibodies and polyvalent antiserum against keratin. <a href="#">J Histochem Cytochem. 34 (8): 1037-46.</a></li> <li>Sonnenberg, A. <i>et al.</i> (1987) A complex of platelet glycoproteins Ic and IIa identified by a rat monoclonal antibody. <a href="#">J Biol Chem. 262 (21): 10376-83.</a></li> <li>Hemler, M.E. <i>et al.</i> (1988) Multiple very late antigen (VLA) heterodimers on platelets. Evidence for distinct VLA-2, VLA-5 (fibronectin receptor), and VLA-6 structures. <a href="#">J Biol Chem. 263 (16): 7660-5.</a></li> <li>Galkowska, H. <i>et al.</i> (1996) Reactivity of antibodies directed against human antigens with surface markers on canine leukocytes. <a href="#">Vet Immunol Immunopathol. 53 (3-4): 329-34.</a></li> <li>Sonnenberg, A. <i>et al.</i> (1988) Laminin receptor on platelets is the integrin VLA-6. <a href="#">Nature. 336 (6198): 487-9.</a></li> <li>Sonnenberg, A. <i>et al.</i> (1990) Integrin recognition of different cell-binding fragments of laminin</li> </ol>

(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 I<sub>c</sub>. [J Biol Chem. 263 \(28\): 14030-8.](#)

12. Le Bellego, F. *et al.* (2005) Cytoskeleton reorganization mediates alpha6beta1 integrin-associated 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. [Development. 136: 3495-504.](#)

14. Collins, C.A. *et al.* (2011) Reprogramming adult dermis to a neonatal state through epidermal activation of  $\beta$ -catenin [Development. 138: 5189-99.](#)

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. [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.](#)

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<b>Further Reading</b>	1. Piriou-Guzylack, L. (2008) Membrane markers of the immune cells in swine: an update. <a href="#">Vet Res. 39: 54.</a>
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<b>Storage</b>	Store at +4°C or at -20°C if preferred.  This product should be stored undiluted.  Storage in frost-free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
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<b>Guarantee</b>	18 months from date of despatch.
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<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10040 available at: 10040: <a href="https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf">https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf</a>
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<b>Regulatory</b>	For research purposes only
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## Related Products

### Recommended Secondary Antibodies

Rabbit Anti Rat IgG (STAR17...)

[FITC](#)

Goat Anti Rat IgG (STAR69...) [FITC](#)  
Goat Anti Rat IgG (STAR131...) [Alk. Phos.](#), [Biotin](#)  
Goat Anti Rat IgG (STAR73...) [RPE](#)  
Rabbit Anti Rat IgG (STAR21...) [HRP](#)  
Goat Anti Rat IgG (STAR72...) [HRP](#)  
Rabbit Anti Rat IgG (STAR16...) [DyLight®800](#)  
Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...) [DyLight®649](#), [DyLight®800](#)

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