

Datasheet: MCA699F

Description:	RAT ANTI HUMAN CD49f:FITC
Specificity:	CD49f
Other names:	INTEGRIN ALPHA 6 CHAIN, VLA-6
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	NKI-GoH3
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	▪			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 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. 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 Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
FITC	490	525

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 1% Bovine Serum Albumin
Approx. Protein Concentrations	IgG concentration 0.1 mg/ml
Immunogen	BALB/c mouse mammary tumor cells
External Database Links	<p>UniProt: P23229 Related reagents</p> <p>Entrez Gene: 3655 ITGA6 Related reagents</p>
RRID	AB_324269
Fusion Partners	Spleen cells from immunized Sprague-Dawley rats were fused with cells of the SP2/0 mouse myeloma cell line
Specificity	<p>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.</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 (Sonnenberg et al. 1998).</p>
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells in 100ul.
References	<ol style="list-style-type: none"> Jensen, K.B. <i>et al.</i> (2010) Assaying proliferation and differentiation capacity of stem cells using disaggregated adult mouse epidermis. Nat Protoc. 5 (5): 898-911. Soligo, D. <i>et al.</i> (1989) Immunohistochemical reactivity on bone marrow and tissues of anti-VLA antibodies in the platelet panel, in <i>Leucocyte Typing IV: White Cell Differentiation Antigens</i>. Edited by Knapp, W. <i>et al.</i> Oxford University Press p1029-1032. 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. J Histochem Cytochem. 34 (8): 1037-46. Sonnenberg, A. <i>et al.</i> (1987) A complex of platelet glycoproteins Ic and IIa identified by a rat monoclonal antibody. J Biol Chem. 262 (21): 10376-83. 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. [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.](#)
 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 β -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) 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.](#)
 20. Loureiro, J. *et al.* (2019) Conjugation of the T1 sequence from CCN1 to fibrin hydrogels for therapeutic vascularization. [Mater Sci Eng C Mater Biol Appl. 104: 109847.](#)
 21. Ikeda, A. *et al.* (2020) Follistatin expressed in mechanically-damaged salivary glands of male mice induces proliferation of CD49f⁺ cells. [Sci Rep. 10 \(1\): 19959.](#)
 22. Haining, E.J. *et al.* (2017) Tetraspanin Tspan9 regulates platelet collagen receptor GPVI lateral diffusion and activation. [Platelets. 28 \(7\): 629-42.](#)

Further Reading

1. Piriou-Guzylack, L. (2008) Membrane markers of the immune cells in swine: an update. [Vet Res. 39: 54.](#)
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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

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:FITC \(MCA6005F\)](#)

Recommended Useful Reagents

[HUMAN SEROBLOCK \(BUF070A\)](#)

[HUMAN SEROBLOCK \(BUF070B\)](#)

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