

## Anti-Mouse CD49f Antibody, Clone GoH3, FITC



Scientists Helping Scientists™ | [WWW.STEMCELL.COM](http://WWW.STEMCELL.COM)

TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713

[INFO@STEMCELL.COM](mailto:INFO@STEMCELL.COM) • [TECHSUPPORT@STEMCELL.COM](mailto:TECHSUPPORT@STEMCELL.COM)

FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

## Antibodies

Rat monoclonal IgG2a antibody  
against human, mouse, rhesus CD49f  
(integrin  $\alpha 6$ ), FITC-conjugated

Catalog #60037FI  
#60037FI.1

100 Tests 5  $\mu$ L/test  
25 Tests 5  $\mu$ L/test

## Product Description

The GoH3 antibody reacts with CD49f (integrin  $\alpha 6$ ), an ~150 kDa transmembrane glycoprotein that associates non-covalently with CD29 (integrin  $\beta 1$ ) or CD104 (integrin  $\beta 4$ ) to form the heterodimeric receptors VLA-6 and  $\alpha 6\beta 4$ , which bind the extracellular matrix protein laminin. CD49f is a disulfide-linked dimer comprising an ~120 kDa heavy chain and an ~30 kDa membrane-bound light chain. Splice variants exist, which affect the cytoplasmic domain of the protein. CD49f is expressed on the surface of T cells, monocytes, platelets, placental trophoblasts, epithelial cells, and endothelial cells. It is involved in cell adhesion and regulating signaling pathways involved in a variety of processes, including the activation and proliferation of T cells, and the differentiation and maintenance of stem cell pluripotency. CD49f is considered the most important marker for selecting mouse mammary stem and progenitor cells. The GoH3 antibody reacts with an extracellular epitope on CD49f and reportedly blocks integrin  $\alpha 6$  function in vivo and binding of integrin  $\alpha 6$  to laminin in vitro.

Target Antigen Name:	CD49f (Integrin $\alpha 6$ )
Alternative Names:	$\alpha 6$ integrin, integrin $\alpha 6$ , VLA-6 $\alpha$ chain
Gene ID:	16403/3655
Species Reactivity:	Human, Mouse, Rhesus, Cynomolgus, Baboon, Chimpanzee, Capuchin Monkey, Cat, Cow, Dog, Horse, Pig, Rabbit, Sheep
Host Species:	Rat (SD)
Clonality:	Monoclonal
Clone:	GoH3
Isotype:	IgG2a, kappa
Immunogen:	Mouse (BALB/c) mammary tumor cells
Conjugate:	FITC (Fluorescein isothiocyanate)

## Applications

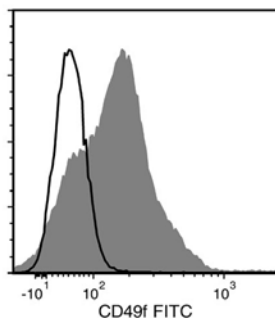
Verified:	FC
Reported:	FACS, FC

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FACS: Fluorescence-activated cell sorting; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; RIA: Radioimmunoassay; WB: Western blotting

## Properties

Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) bovine serum albumin
Purification:	The antibody was purified by affinity chromatography and conjugated with FITC under optimal conditions. The solution is free of unconjugated FITC.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. Protect product from prolonged exposure to light. For product expiry date, please contact <a href="mailto:techsupport@stemcell.com">techsupport@stemcell.com</a> .
Directions for Use:	For flow cytometry, the suggested use of this antibody is $\leq 5 \mu$ L per $1 \times 10^6$ cells in 100 $\mu$ L. It is recommended that the antibody be titrated for optimal performance for each application.

## Data



Flow cytometry analysis of human peripheral blood mononuclear cells (PBMCs) labeled with Anti-Mouse CD49f Antibody, Clone GoH3, FITC (filled histogram) or Rat IgG2a, kappa Isotype Control Antibody, Clone RTK2758, FITC (Catalog #60076FI) (solid line histogram).

## Related Products

For a complete list of antibodies, including other conjugates, sizes and clones, as well as related products available from STEMCELL Technologies, visit [www.stemcell.com/antibodies](http://www.stemcell.com/antibodies) or contact us at [techsupport@stemcell.com](mailto:techsupport@stemcell.com).

## References

1. Gori JL et al. (2017) Endothelial cells promote expansion of long-term engrafting marrow hematopoietic stem and progenitor cells in primates. *Stem Cells Transl Med* 6(3): 864–76. (FC)
2. Yu K-R et al. (2012) CD49f enhances multipotency and maintains stemness through the direct regulation of OCT4 and SOX2. *Stem Cells* 30(5): 876–87.
3. Grange C et al. (2011) Microvesicles released from human renal cancer stem cells stimulate angiogenesis and formation of lung premetastatic niche. *Cancer Res* 71(15): 5346–56. (FC)
4. Jo M et al. (2010) Cell signaling by urokinase-type plasminogen activator receptor induces stem cell-like properties in breast cancer cells. *Cancer Res* 70(21): 8948–58. (FC)
5. Stingl J et al. (2006) Purification and unique properties of mammary epithelial stem cells. *Nature* 439(7079): 993–7. (FC)
6. Ambrose HE & Wagner SD. (2004) Alpha6-integrin is expressed on germinal centre B cells and modifies growth of a B-cell line. *Immunology* 111(4): 400–6. (FC)
7. 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. (FC)
8. Lee EC et al. (1992) The integrin alpha 6 beta 4 is a laminin receptor. *J Cell Biol* 117(3): 671–8. (Blocking, FA, IP)
9. Aumailley M et al. (1990) Antibody to integrin alpha 6 subunit specifically inhibits cell-binding to laminin fragment 8. *Exp Cell Res* 188(1): 55–60. (FA)
10. Hemler ME 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.
11. 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. (FC, IHC, IF)

STEMCELL TECHNOLOGIES INC.'S QUALITY MANAGEMENT SYSTEM IS CERTIFIED TO ISO 13485. PRODUCTS ARE FOR RESEARCH USE ONLY AND NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES UNLESS OTHERWISE STATED.

Copyright © 2018 by STEMCELL Technologies Inc. All rights reserved including graphics and images. STEMCELL Technologies & Design, STEMCELL Shield Design, Scientists Helping Scientists, and StemSpan are trademarks of STEMCELL Technologies Canada Inc. All other trademarks are the property of their respective holders. Alexa Fluor and Pacific Blue are trademarks of Life Technologies Corporation. Antibodies conjugated to Alexa Fluor® or Pacific Blue™ are licensed for internal research use only and sale is expressly conditioned on the buyer not using the antibody for manufacturing, performing a service or medical test, or otherwise generating revenue. For use other than research, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad, CA 92008 USA or [outlicensing@lifetech.com](mailto:outlicensing@lifetech.com). While STEMCELL has made all reasonable efforts to ensure that the information provided by STEMCELL and its suppliers is correct, it makes no warranties or representations as to the accuracy or completeness of such information.