

Ultra-LEAF™ Purified anti-human/mouse CD49f Antibody

Catalog# / Size	313637 / 100 µg 313638 / 1 mg
Clone	GoH3
Regulatory Status	RUO
Workshop	HCDM listed
Other Names	VLA-6 α chain, α6 integrin, integrin α6, ITGA6
Isotype	Rat IgG2a, κ
Description	CD49f is a 120 kD integrin family member also known as VLA-6 α chain and α6 integrin subunit. CD49f associates with either integrin β ₁ (CD29) or integrin β ₄ (CD104) to form receptors (VLA-6 or α6β ₄ complex) for laminin and kalinin. CD49f is expressed on platelets, monocytes, T cells, placental trophoblasts, and epithelial and endothelial cells. CD49f is involved in adhesion and can act as a co-stimulatory molecule for T cell activation and proliferation.

Product Details

Verified Reactivity	Human, Cynomolgus, Rhesus
Reported Reactivity	African Green, Mouse, Baboon, Capuchin Monkey, Cat, Cow, Chimpanzee, Cynomolgus, Dog, Horse, Rabbit, Sheep, Pig
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Mouse mammary tumor cells
Formulation	0.2 µm filtered in phosphate-buffered solution, pH 7.2, containing no preservative. Endotoxin level is <0.01 EU/µg of the protein (<0.001 ng/µg of the protein) as determined by the LAL test.
Preparation	The Ultra-LEAF™ (Low Endotoxin, Azide-Free) antibody was purified by affinity chromatography.
Concentration	The antibody is bottled at the concentration indicated on the vial, typically between 2 mg/mL and 3 mg/mL. Older lots may have also been bottled at 1 mg/mL. To obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C. This Ultra-LEAF™ solution contains no preservative; handle under aseptic conditions.
Application	FC - Quality tested ICC - Verified IHC-F, IP, Block - Reported in the literature, not verified in house
Recommended Usage	Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis . For flow cytometric staining, the suggested use of this reagent is ≤ 0.5 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	Additional reported applications (for the relevant formats) include: immunoprecipitation ^{1,5} , <i>in vitro</i> and <i>in vivo</i> blocking of cell binding to laminin and blocking the function of integrin α6 ^{1,4} , and immunohistochemistry of acetone-fixed frozen sections ^{2,3,5} . The GoH3 antibody has been reported to block laminin binding <i>in vitro</i> and to block integrin α6 function <i>in vivo</i> .
Application References	1. Georas SN, <i>et al.</i> 1993. <i>Blood</i> 82:2872. (IP, Block) 2. Honda T, <i>et al.</i> 1995. <i>J. Clin. Endocrinol. Metab.</i> 80:2899. (IHC) 3. Sonnenberg A, <i>et al.</i> 1986. <i>J. Histochem. Cytochem.</i> 34:1037. (IHC) 4. Nakamura K, <i>et al.</i> 1997 <i>Biochem. Biophys. Res. Commun.</i> 235:524. (Block) 5. Sonnenberg A, <i>et al.</i> 1987 <i>J. Biol. Chem.</i> 262:10376. (IP, IHC) 6. Deregibus MC, <i>et al.</i> 2007. <i>Blood</i> doi:10.1182/blood-2007-03-078709.
(PubMed link indicates BioLegend citation)	

7. Horwitz KB, *et al.* 2008. *Proc Natl Acad Sci USA*. 105:5774. [PubMed](#)
8. Nardella C, *et al.* 2009. *Sci Signal*. 2:55. [PubMed](#)
9. Xu T, *et al.* 2010. *Mol Cancer Ther*. 9:438. [PubMed](#)
10. Stepp MA, *et al.* 2007. *J Cell Sci*. 120:2851. [PubMed](#)
11. Jo M, *et al.* 2010. *Cancer Res*. 70:8948. [PubMed](#)
12. Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
13. Grange C, *et al.* 2011. *Cancer Res*. 71:5346. [PubMed](#)
14. Lai KP, *et al.* 2012. *Mol Endocrinol*. 26:52. [PubMed](#)
15. Oeztuerk-Winder F, *et al.* 2012. *EMBO J*. 31:3431. (FC) [PubMed](#)

Product Citations

1. Speer J, *et al.* 2021. *Eur Cell Mater*. 41:793. [PubMed](#)

RRID

AB_2814165 (BioLegend Cat. No. 313637)
 AB_2814166 (BioLegend Cat. No. 313638)

Antigen Details

Structure	Integrin family, associates with $\beta 1$ or $\beta 4$, 120 kD
Distribution	Platelets, monocytes, T cells, placental trophoblasts, epithelial and endothelial cells
Function	Adhesion, receptor for laminin and kalinin; laminin binding to VLA-6 induces T cell co-stimulation for proliferation and activation
Ligand/Receptor	With integrin $\beta 1$ (CD29) forms VLA-6, with integrin $\beta 4$ (CD104) forms $\alpha 6\beta 4$ integrin; laminin and kalinin are ligands for these receptors
Cell Type	Embryonic Stem Cells, Endothelial cells, Epithelial cells, Monocytes, Platelets, T cells
Biology Area	Cell Adhesion, Cell Biology, Immunology, Innate Immunity, Stem Cells
Molecular Family	Adhesion Molecules, CD Molecules
Antigen References	<ol style="list-style-type: none"> 1. Sonnenberg A, <i>et al.</i> 1990. <i>J. Cell Biol.</i> 110:2145. 2. Sonnenberg A, <i>et al.</i> 1990. <i>J. Cell. Sci.</i> 96:207. 3. Aumailley M, <i>et al.</i> 1990. <i>Exp. Cell Res.</i> 188:55. 4. Niessen CM, <i>et al.</i> 1994. <i>Exp. Cell Res.</i> 211:360.
Gene ID	16403 3655

Related Protocols

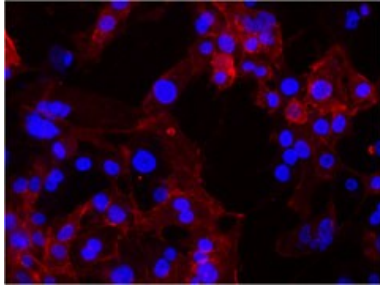
[Cell Surface Flow Cytometry Staining Protocol](#)

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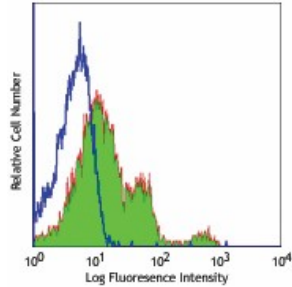
Other Formats

Purified anti-human/mouse CD49f, Biotin anti-human/mouse CD49f, FITC anti-human/mouse CD49f, Alexa Fluor® 488 anti-human/mouse CD49f, Alexa Fluor® 647 anti-human/mouse CD49f, PE anti-human/mouse CD49f, APC anti-human/mouse CD49f, PerCP/Cyanine5.5 anti-human/mouse CD49f, Pacific Blue™ anti-human/mouse CD49f, PE/Cyanine7 anti-human/mouse CD49f, Brilliant Violet 421™ anti-human/mouse CD49f, PE/Dazzle™ 594 anti-human/mouse CD49f, APC/Cyanine7 anti-human/mouse CD49f, APC/Fire™ 750 anti-human/mouse CD49f, TotalSeq™-A0070 anti-human/mouse CD49f, TotalSeq™-C0070 anti-human/mouse CD49f, Ultra-LEAF™ Purified anti-human/mouse CD49f, TotalSeq™-B0070 anti-human/mouse CD49f, TotalSeq™-D0070 anti-human/mouse CD49f

Product Data



MDA-MB-231 breast cancer cells were stained with anti-CD49f (clone GoH3) followed by DyLight™ 649 Goat anti-rat Ig secondary antibody (red), plus DAPI staining for nuclei (blue). Images were taken under 20x bin4 (Filter set: EX647/10x, Dichroic 665LP, EM 700/70x) at exposure 4s. Data provided by Er Liu and John Nolan, La Jolla Institute for Bioengineering.



Human peripheral blood lymphocytes stained with purified GoH3, followed by anti-rat IgGs FITC

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