Brilliant Violet 510™ anti-human/mouse CD49f Antibody

Catalog# / Size	313643 / 25 tests 313644 / 100 tests
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 α_6 integrin subunit. CD49f associates with either integrin β_1 (CD29) or integrin β_4 (CD104) to form receptors (VLA-6 or $\alpha_6\beta_4$ 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, Mouse, Cynomolgus, Rhesus
Reported Reactivity	African Green, Baboon, Capuchin Monkey, Cat, Cow, Chimpanzee, Cynomolgus, Dog, Horse, Rabbit, Sheep, Pig
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Mouse mammary tumor cells
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 510™ under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration and expiration, please enter the lot number in our Certificate of Analysis online tool.)
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. **Do not freeze**.
Application	FC - Quality tested
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 5 µL per million cells in 100 µL staining volume or 5 µL per 100 µL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application. Brilliant Violet 510™ excites at 405 nm and emits at 510 nm. The bandpass filter 510/50 nm is recommended for detection, although filter optimization may be required depending on other fluorophores used. Be sure to verify that your cytometer configuration and software setup are appropriate for detecting this channel. Refer to your instrument manual or manufacturer for support. Brilliant Violet 510™ is a trademark of Sirigen Group Ltd. Learn more about Brilliant Violet™. This product is subject to proprietary rights of Sirigen Inc. and is made and sold under license from Sirigen Inc. The purchase of this product conveys to the buyer a non-transferable right to use the purchased product for research purposes only. This product may not be resold or incorporated in any manner into another product for resale. Any use for therapeutics or diagnostics is strictly prohibited. This product is covered by U.S. Patent(s), pending patent applications and foreign equivalents.
Excitation Laser	Violet Laser (405 nm)

Application Notes	Additional reported applications (for the relevant formats) include: immunoprecipitation[1,5], *in vitro* and *in vivo* blocking of cell binding to laminin and blocking the function of integrin a_6[1,4], and immunohistochemistry of acetone-fixed frozen sections[2,3,5]. The GoH3 antibody has been reported to block laminin binding *in vitro* and to block integrin a_6 function *in vivo*.
Application References **(PubMed link indicates BioLegend citation)**	1. Georas SN, *et al.* 1993. *Blood* 82:2872. (IP, Block) 2. Honda T, *et al.* 1995. *J. Clin. Endocrinol. Metab.* 80:2899. (IHC) 3. Sonnenberg A, *et al.* 1986. *J. Histochem. Cytochem.* 34:1037. (IHC) 4. Nakamura K, *et al.* 1997 *Biochem. Biophys. Res. Commun.* 235:524. (Block) 5. Sonnenberg A, *et al.* 1987 *J. Biol. Chem.* 262:10376. (IP, IHC) 6. Deregibus MC, *et al.* 2007. *Blood* doi:10.1182/blood-2007-03-078709. 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) See More
RRID	AB_3662220 (BioLegend Cat. No. 313643) AB_3662220 (BioLegend Cat. No. 313644)

Antigen Details

Structure	Integrin family, associates with β1 or β4, 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 β1 (CD29) forms VLA-6, with integrin β4 (CD104) forms a6β4 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	1. Sonnenberg A, *et al.* 1990. *J. Cell Biol.* 110:2145. 2. Sonnenberg A, *et al.* 1990. *J. Cell. Sci.* 96:207. 3. Aumailley M, *et al.* 1990. *Exp. Cell Res.* 188:55. 4. Niessen CM, *et al.* 1994. *Exp. Cell Res.* 211:360.
Gene ID	16403 3655

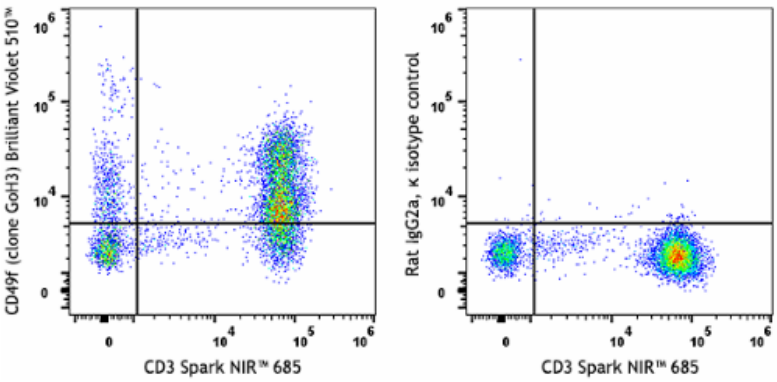
Related Protocols

- Cell Surface Flow Cytometry Staining Protocol

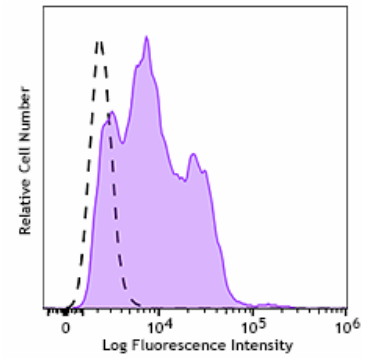
Other Formats

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, Brilliant Violet 510™ anti-human/mouse CD49f, Spark Blue™ 550 anti-human/mouse CD49f (Flexi-Fluor™), Spark Blue™ 574 anti-human/mouse CD49f (Flexi-Fluor™) Antibody, Spark Red™ 718 anti-human/mouse CD49f (Flexi-Fluor™), Spark PLUS UV395™ anti-human/mouse CD49f

Product Data



Human peripheral blood lymphocytes were stained with anti-human CD3 (clone SK7) Spark NIR™ 685 and anti-human/mouse CD49f (clone GoH3) Brilliant Violet 510™ (left) or rat IgG2a, κ Brilliant Violet 510™ isotype control (right).



Human peripheral blood lymphocytes were stained with anti-human/mouse CD49f (clone GoH3) Brilliant Violet 510™ (filled histogram) or rat IgG2a, κ Brilliant Violet 510™ isotype control (open histogram).

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