APC anti-human/mouse CD49f Antibody

Catalog# / Size	313615 / 25 tests 313616 / 100 tests
Clone	GoH3
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

Reactivity	Human, African Green, Mouse, Baboon, Capuchin Monkey, Cat (Feline), Cattle (Bovine, Cow), Chimpanzee, Cynomolgus, Dog (Canine), Horse (Equine), Rabbit (Lapine), Rhesus, Sheep (Ovine), Swine (Pig, Porcine)
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Mouse mammary tumor cells
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA (origin USA).
Preparation	The antibody was purified by affinity chromatography, and conjugated with APC under optimal conditions.
Concentration	Lot-specific (please contact technical support for concentration and total µg amount, or use our Lookup tool if you have a lot number.)
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.
Excitation Laser	Red Laser (633 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 α_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 α_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)

Product Citations

1. Morimoto H, et al. 2009. PLoS One. 4:e7909. PubMed
2. Volkmer J, et al. 2012. Proc Natl Acad Sci U S A. 109:2078. PubMed

3. Saen D, et al. 2013. Fertil Steril. 99:1264. PubMed
4. Szade K, et al. 2013. PLoS One. 8:63329. PubMed
5. Chang J, et al. 2013. J Biol Chem. 288:28952. PubMed
6. Chang J, et al. 2013. Stem Cell Res. 11:990. PubMed
7. Saenz F, et al. 2014. PLoS One. 9:97666. PubMed
8. Li Y, et al. 2014. Cell Death Dis. 5:1550. PubMed
9. Cichon M, et al. 2016. Cancer Res . 76: 3520 - 3530. PubMed
10. Skowron K, et al. 2016. Sci Rep. 6:35854. PubMed
11. Liu S, et al. 2016. PLoS One. 11:e0163232. PubMed
12. Dall G, et al. 2017. Stem Cell Reports. 8(2):417-431. PubMed

RRID

AB_2734290 (BioLegend Cat. No. 313615)
AB_1575047 (BioLegend Cat. No. 313616)

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

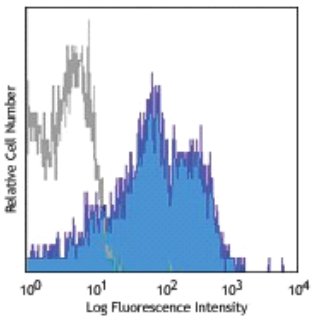
Related Protocols

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, 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

Product Data



Human peripheral blood lymphocytes were stained with anti-human/mouse CD49f (clone GOH3) APC (filled histogram) or rat IgG2a, κ APC isotype control (open histogram).

8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587