

Spark PLUS UV395™ anti-human CD29 Antibody

Catalog# / Size	303039 / 25 tests 303040 / 100 tests
Clone	TS2/16
Regulatory Status	RUO
Workshop	V A-S202
Other Names	Integrin β 1 chain, VLA- β chain, gpIIa, ITGB1
Isotype	Mouse IgG1, κ
Description	CD29 is a 130 kD single chain type I glycoprotein also known as integrin β 1, VLA- β chain, or gpIIa. It is broadly expressed on a majority of hematopoietic and non-hematopoietic cells, including leukocytes (although at low level on granulocytes), platelets, fibroblasts, endothelial cells, epithelial cells, and mast cells. CD29 is a member of the integrin family. It is non-covalently associated with integrin α 1- α 6 chains to form VLA-1 to VLA-6 molecules, respectively. Integrins, which include CD29, bind to several cell surface (e.g. VCAM-1, MadCAM-1) and extracellular matrix molecules. CD29 acts as a fibronectin receptor and is involved in a variety of cell-cell and cell-matrix interactions.

Product Details

Verified Reactivity	Human
Reported Reactivity	African Green, Baboon, Cow, Cynomolgus, Dog, Horse, Rhesus
Antibody Type	Monoclonal
Host Species	Mouse
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 Spark PLUS UV395™ 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 μ L per million cells in 100 μ L staining volume or 5 μ L per 100 μ L of whole blood. It is recommended that the reagent be titrated for optimal performance for each application. * Spark PLUS UV395™ has a maximum excitation of 355 nm and a maximum emission of 385 nm.
Excitation Laser	Ultraviolet Laser (355 nm)
Application Notes	Additional reported applications (for the relevant formats) include: immunoprecipitation ³ , immunohistochemical staining of acetone-fixed frozen tissue sections ^{3,5} , and activation of integrin β 1 ^{4,7,8} . The LEAF™ purified antibody (Endotoxin <0.1 EU/ μ g, Azide-Free, 0.2 μ m filtered) is recommended for functional assays (Cat. No. 303010). Clone TS2/16 recognizes epitope A2. ¹⁰

Application References

(PubMed link indicates
BioLegend citation)

1. Schlossman S, *et al.* Eds. 1995. Leucocyte Typing V. Oxford University Press. New York.
2. Gutierrez-Lopez M, *et al.* 2003. *J. Biol. Chem.* 278:208.
3. Hemler ME, *et al.* 1984. *J. Immunol.* 132:3011. (IHC, IP)
4. Sanchez-Aparicio P, *et al.* 1994. *J. Cell Biol.* 126:271. (Activ)
5. Frank NY, *et al.* 2005. *Cancer Res.* 65:4320. (IHC)
6. Murga M, *et al.* 2005. *Blood* 105:1992. (FC) [PubMed](#)
7. Porter JC and Hogg N. 1997. *J. Cell Biol.* 138:1437. (Activ)
8. Conway RE, *et al.* 2006. *Mol. Cell. Biol.* 26:5310. (Activ)
9. Wesseling J, *et al.* 1995. *J. Cell. Biol.* 129:255. (Dog Reactivity)
10. Rubio G, *et al.* 2002. *Cancer Immunol. Immunother.* 51:130.
11. Dong A, *et al.* 2015. *J Biol Chem.* 290:8016. PubMed
12. Paebst F, *et al.* 2014. *Cytometry A.* 85(8):678-87. (Horse reactivity)

Antigen Details

Structure	Integrin, type I glycoprotein, forms VLA-1 to VLA-6 heterodimers with CD49a-f (α_1 - α_6), also associates with CD51 (α_V), and α_7 - α_9 , 130 kD
Distribution	Lymphocytes, monocytes, granulocytes (low), platelets, mast cells, fibroblasts, endothelial cells
Function	Cell-cell and cell-matrix interactions
Ligand/Receptor	VCAM-1, MAdCAM-1, ECM
Cell Type	Embryonic Stem Cells, Endothelial cells, Fibroblasts, Granulocytes, Lymphocytes, Mast cells, Mesenchymal Stem Cells, Monocytes, Platelets, Tregs
Biology Area	Cell Adhesion, Cell Biology, Immunology, Innate Immunity, Stem Cells
Molecular Family	Adhesion Molecules, CD Molecules
Antigen References	1. Hemler M. 1990. <i>Annu. Rev. Immunol.</i> 8:365. 2. Hynes R. 1992. <i>Cell</i> 69:11.
Gene ID	3688

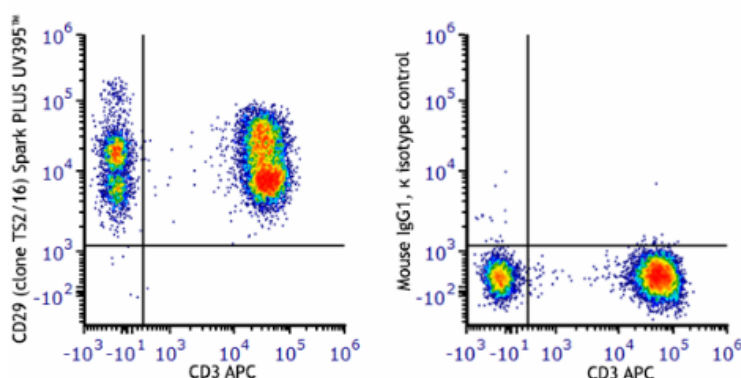
Related Protocols

- [Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

TotalSeq™-D0369 anti-human CD29, PerCP/Cyanine5.5 anti-human CD29, PE/Cyanine7 anti-human CD29, APC anti-human CD29, PE anti-human CD29, PE/Cyanine5 anti-human CD29, Purified anti-human CD29, Maxpar® Ready), Spark PLUS UV395™ anti-human CD29 Antibody, APC/Cyanine7 anti-human CD29, Alexa Fluor® 700 anti-human CD29, TotalSeq™-C0369 anti-human CD29, PE/Dazzle™ 594 anti-human CD29, Ultra-LEAF™ Purified anti-human CD29, Alexa Fluor® 488 anti-human CD29, Alexa Fluor® 647 anti-human CD29, TotalSeq™-A0369 anti-human CD29, TotalSeq™-B0369 anti-human CD29

Product Data



Human peripheral blood lymphocytes stained with anti-human CD3 (clone UCHT1) APC and anti-human CD29 (clone TS2/16) Spark PLUS UV395™ (left) or mouse IgG1, κ Spark PLUS UV395™ isotype control (right).

For Research Use Only. Not for diagnostic or therapeutic use.

This product is supplied subject to the terms and conditions, including the limited license, located at www.biolegend.com/terms ("Terms") and may be used only as provided in the Terms. Without limiting the foregoing, BioLegend products may not be used for any Commercial Purpose as defined in the Terms, resold in any form, used in manufacturing, or reverse engineered, sequenced, or otherwise studied or used to learn its design or composition without express written approval of BioLegend. Regardless of the information given in this document, user is solely responsible for determining any license requirements necessary for user's intended use and assumes all risk and liability arising from use of the product. BioLegend is not responsible for patent infringement or any other risks or liabilities whatsoever resulting from the use of its products.

BioLegend, the BioLegend logo, and all other trademarks are property of BioLegend, Inc. or their respective owners, and all rights are reserved.

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