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Product Data Sheet

LEAF™ Purified anti-human CD29

Catalog # / Size: 303009 / 50 µg
303010 / 500 µg

Clone: TS2/16

Isotype: Mouse IgG1, κ

Workshop Number: V A-S202

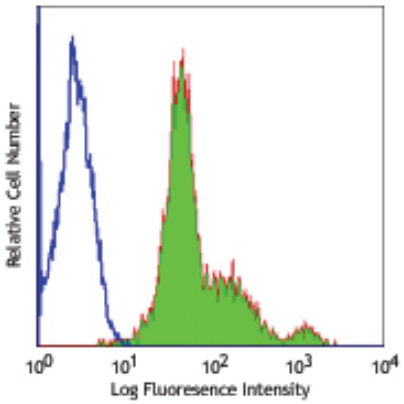
Reactivity: Human, **Cross-Reactivity*:** Cattle (Bovine, Cow)

Preparation: The LEAF™ (Low Endotoxin, Azide-Free) antibody was purified by affinity chromatography.

Formulation: 0.2 µm filtered in phosphate-buffered solution, pH 7.2, containing no preservative. Endotoxin level is <0.1 EU/µg of the protein (<0.01 ng/µg of the protein) as determined by the LAL test.

Concentration: 1.0 mg/ml

Storage: The antibody solution should be stored undiluted at 4°C. This LEAF™ solution contains no preservative; handle under aseptic conditions.



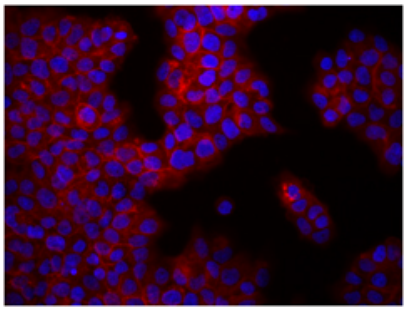
Human peripheral blood lymphocytes stained with LEAF™ purified TS2/16, followed by anti-mouse IgGs FITC

Applications:

Applications: FC - *Quality tested*
IF - *Validated*
IP, IHC, Activ - *Reported in the literature*

Recommended Usage: Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For immunofluorescent staining, the suggested use of this reagent is ≤2.0 µg per million cells in 100 µl volume or 100 µl of whole blood. 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[3], immunohistochemical staining[3,5] of acetone-fixed frozen tissue sections, and activation[4,7,8] of integrin β_1. The LEAF™ Purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 303010).



BT474 breast cancer cells were stained with anti-CD29 (clone TS2/16) followed by DyLight™ 649 Goat anti-mouse 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.

Application References:
1. Schlossman S, *et al.* Eds. 1995. Leucocyte Typing V. Oxford University Press. New York. (FC)
2. Gutierrez-Lopez M, *et al.* 2003. *J. Biol. Chem.* 278:208. (FC)
3. Hemler ME, *et al.* 1984. *J. Immunol.* 132:3011. (FC IP IHC)
4. Sanchez-Aparicio P, *et al.* 1994. *J. Cell Biol.* 126:271. (Activ)
5. Frank NY, *et al.* 2005. *Cancer Res.* 65:4320. (FC IHC)
6. Murga M, *et al.* 2005. *Blood* 105:1992. (FC)
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. Barbolina MV, *et al.* 2010. *Mol Cancer Res.* 8:653. PubMed

Description: CD29 is a 130 kD single chain type I glycoprotein, 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 α1-α6 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.

Antigen References:
1. Hemler M. 1990. *Annu. Rev. Immunol.* 8:365.
2. Hynes R. 1992. *Cell* 69:11.

Related Products:

Product	Clone	Application
LEAF™ Purified anti-human CD49d	9F10	Costim, FC, IHC
LEAF™ Purified Mouse IgG1, κ Isotype Ctrl	MOPC-21	FC, ICFC, WB, IP, ICC, IF, FA

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